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41. Carlisle Non-hazardous Products

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

Aquabase 120

Synonyms

Water based Adhesive

Chemical Family

Adhesive

Product Use

Contact Adhesive for TPO/EPDM Single-ply roofing

Restrictions on Use

None identified

Manufacturer Information

Carlisle SynTec

1285 Ritner Highway

Carlisle, PA 17013 USA

Phone: +1-800-479-6832

Emergency Phone #: +1-800-424-9300 (Chemtrec)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Skin Sensitization - Category 1

GHS Label Elements

Symbol(s)



Signal Word

Warning

Precautionary Statement(s)

Prevention

Avoid breathing vapors, mist, or spray.

Wear protective gloves

Contaminated work clothing must not be allowed out of the workplace

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Material Name: Aquabase 120

Product #307431

Response

IF ON SKIN was with plenty of soap and water
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse

Storage

Not prescribed

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
102-71-6	Triethanolamine	0.1-1

Section 4 - FIRST AID MEASURES

Inhalation

Move to fresh air. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention

Skin

Immediately wash skin thoroughly with soap and water. Remove contaminated clothing and footwear. If symptoms develop and persist, get medical attention.

Eyes

Rinse immediately with water for 15 minutes also under the eyelids. Get medical advice/attention.

Ingestion

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person..

Symptoms

See section 11

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Safety Data Sheet

Material Name: Aquabase 120

Product #307431

Extinguishing Media

Use extinguishing measures appropriate to local circumstances and the surrounding environment.

Unusual fire or explosion hazards:

This product is an aqueous mixture which will not burn. If evaporated to dryness, the solid residue may pose a slight fire hazard.

Hazardous Combustion Products

Oxides of carbon

Special firefighting procedures: Keep unnecessary personnel away. Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA).

Section 6 - ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Methods and Materials for Containment and Cleaning Up

Keep unnecessary personnel away. Ensure adequate ventilation. Wear appropriate protective equipment and clothing during clean-up. Dispose of contaminated material as waste according to Section 13.

Environmental Precautions

Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Do not allow product to enter sewer or waterways

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Conditions for Safe Storage

Do not freeze.

Incompatible Materials

Acids, bases, strong oxidizing agents

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

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Triethanolamine	102-71-6
ACGIH TLV:	5 mg/m ³ TWA
OSHA (US) PEL:	None
AIHA WEEL	None

Engineering Controls

Work should be done in an adequately ventilated area (i.e., ventilation sufficient to maintain concentrations below one half of the PEL and other relevant standards). Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination.

Eye/face protection

Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists.

Skin Protection

Use impermeable gloves and protective clothing as necessary to prevent skin contact. Wear suitable protective clothing.

Respiratory Protection

Use NIOSH approved respirator if there is potential to exceed exposure limit(s). Observe OSHA regulations for respirator use (29 CFR 1910.134).

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	liquid	Physical State	liquid
Odor	Ammonia	Color	pink
Odor Threshold	Not available	pH	8.25
Melting Point	0 °C (32°F) (Freezing point)	Boiling Point	56 - 139 °C (133-283 °F)
Freezing point	Not available	Evaporation Rate	Same as water.
Boiling Point Range	100 °C (212°F)	Flammability (solid, gas)	Not available
Autoignition	Not determined	Flash Point	> 100 °C (> 212°F)
Lower Explosive Limit	Not available.	Decomposition	Not available
Upper Explosive Limit	Not available.	Vapor Pressure	Not determined
Vapor Density (air=1)	Heavier than air	Specific Gravity (water=1)	1.06

Safety Data Sheet

Material Name: Aquabase 120

Product #307431

Water Solubility	Soluble	Partition coefficient: n-octanol/water	Not determined
Viscosity	Not available.	VOC	0.0 G/L

Other Information

No additional information available.

Section 10 - STABILITY AND REACTIVITY

Reactivity

Not available

Stability

Stable under normal conditions of use.

Hazardous Reactions

Will not occur.

Conditions to Avoid

Do not freeze

Incompatible Materials

Contact with water reactive materials (such as oleum) can cause exothermic reactions.

Hazardous decomposition products

Oxides of carbon

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

Inhalation of vapors or mists of the product may be irritating to the respiratory system.

Skin Contact

Prolonged or repeated skin contact may cause skin irritation or allergic skin sensitization reaction.

Eye Contact

This product may cause slight irritation to the eyes.

Ingestion

Ingestion of this product is unlikely. However, ingestion of product may produce gastrointestinal irritation and disturbances.

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Safety Data Sheet

Material Name: Aquabase 120

Product #307431

Triethanolamine
Oral LD50 Rat 8.0 g/kg
Dermal LD50 Rabbit >20,000 mg/kg

Immediate Effects

Irritant, Allergen

Component Carcinogenicity

Triethanolamine	
IARC:	No
OSHA	No
NTP	No

Section 12 - ECOLOGICAL INFORMATION

Ecological information

Not available

Section 13 - DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal:

Legal disposition of wastes is the responsibility of the owner/generator of the waste. Applicable federal, state and/or local regulations must be followed during treatment, storage, or disposal of waste containing this product.

Hazardous waste number:

Not a RCRA hazardous waste.

Section 14 - TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Not regulated

Hazard class or division: None

Material Name: Aquabase 120

Product #307431

Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

TSCA 8 (b) Inventory Status

All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

TSCA 12 (b) Export Notification:

None above reporting de minimis

CERCLA/SARA Section 302 EHS: None above reporting de minimis

CERCLA/SARA Section 311/312: Immediate Health

CERCLA/SARA Section 313: None above reporting de minimis

California Proposition 65:

This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status:

One or more components are not listed on, and are not exempt from listing on either the Domestic Substances List or the Non-Domestic Substances List.

Safety Data Sheet

Material Name: Aquabase 120

Product #307431

Section 16 - OTHER INFORMATION

Summary of Changes

Revision Date: June 1, 2018

Revision Note: General Update

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use

Safety Data Sheet

Material Name: OlyBond 500 BA Part A

Product #: 310476

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name: OlyBond 500 BA Part A

Product Use: Two-component polyurethane system

Restrictions on Use: For industrial use only

Manufacturer Information

Carlisle SynTec Systems
1285 Ritner Highway
Carlisle, PA 17013
USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Acute Toxicity, Inhalation – Category 4

Respiratory Sensitization – Category 1

Skin Sensitization – Category 1

Skin Irritation – Category 2

Eye Irritation – Category 2A

Specific Target Organ Toxicity, Single Exposure – Category 3

Specific Target Organ Toxicity, Repeated Exposure – Category 2

GHS Label Elements

Symbol(s)



Signal Word

Danger

Hazard Statement

May be harmful if inhaled, and may cause allergy or asthma symptoms, breathing difficulties, and/or respiratory irritation.

May cause an allergic skin reaction.

May cause skin irritation and serious eye irritation.

May cause damage to the respiratory system and/or skin through prolonged or repeated exposure.

Precautionary Statements

Do not breathe mist, spray, or vapors.

Use only outdoors or in a well-ventilated area.

In case of inadequate ventilation wear proper respiratory protection.

Wear protective gloves and eye/face protection.

Wash hands and forearms thoroughly after handling.

Safety Data Sheet

Material Name: OlyBond 500 BA Part A

Product #: 310476

Get medical advice/attention if you feel unwell.

IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms or if you feel unwell, call a doctor or Poison Control Center.

IF ON SKIN: Wash with plenty of water. Take off contaminated clothing and wash before reuse. Contaminated work clothing must not be allowed out of the workplace. If skin irritation or rash occurs, get medical advice/attention.

IF IN EYES: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Store locked up in a well-ventilated place. Keep container tightly closed. Dispose of contents/container in accordance with applicable regulations. The acute toxicities of <10% of the product's ingredients are unknown.

Emergency overview

Overexposure to components of this product by inhalation may cause respiratory irritation, asthma-like symptoms, and/or respiratory sensitization. The supplier has conducted an exposure assessment under representative working conditions, and has determined that exposure in excess of the OSHA Permissible Exposure Limit is not likely when the product is used in an outdoor environment in accordance with instructions and safe work practices.

Skin contact may cause irritation and/or allergy-like symptoms, and eye contact may cause severe irritation. Avoid skin and eye contact, using proper personal protective equipment as needed. See Section #7 for recommendations on proper handling and work practices, and Section #8 for recommendations on personal protective equipment.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
26447-40-5	Diphenylmethane Diisocyanate Mixed Isomers	<10
101-68-8	4,4'-Methylene Bisphenyl Isocyanate	38 ± 1
9016-87-9	Polymeric Isocyanates	<55

Section 4 - FIRST AID MEASURES

Eyes

Hold eyes open and flush with lukewarm water for at least 15 minutes. Seek immediate medical assistance.

Skin

Remove contaminated clothing. Wash affected areas with soap and water for at least five minutes. If irritation persists or a rash occurs, seek medical attention. Launder or dry-clean clothing before reuse.

Ingestion

DO NOT induce vomiting. If the subject is conscious, wash mouth and give 2 or more cups of milk or water. Seek immediate medical assistance. Do not attempt to give anything by mouth to an unconscious or convulsive person.

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Material Name: OlyBond 500 BA Part A

Product #: 310476

Inhalation

If signs and symptoms of respiratory toxicity are observed, remove subject from area and seek immediate medical attention. Keep the subject warm and at rest. If necessary, administer oxygen or perform artificial respiration if necessary and qualified personnel are available to do so.

Note to physician

Inhalation exposure can irritate the respiratory tract and induce respiratory sensitization. Treatment of acute irritation and bronchial constriction should be done according to symptoms. Eye contact can cause moderate to severe irritation. Skin contact can cause moderate irritation, and may elicit an allergic response among susceptible individuals. Treat eye and skin irritation or injury according to symptoms. Extended medical treatment may be necessary for individuals exhibiting respiratory sensitization and/or skin disorders.

Section 5 – FIRE FIGHTING MEASURES

Extinguishing Media

Water spray, carbon dioxide, dry chemical or chemical foam. DO NOT use water jet.

Fire and Explosion Hazards

This product may ignite if exposed to sources of ignition at temperatures in excess of its flash point. If present in a fire or explosion, potential thermal decomposition byproducts include carbon monoxide, oxides of nitrogen, organic isocyanates, and hydrogen cyanide.

Advice for firefighters

If fighting a fire in which this product is present, wear a self-contained breathing apparatus with full-facepiece operated in pressure-demand or other positive pressure mode.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes, and mucous membranes. Wear appropriate personal protective equipment (see Section #8) during cleanup and decontamination. Restrict unauthorized personnel during cleanup and disposal operations.

Environmental precautions

Prevent spills from entering sewers or contaminating soil.

Methods and material for containment and cleaning up

Absorb spilled material with a sorbent such as sawdust or calcium silicate hydrate. When absorbed, transfer to an impervious container. Neutralize with solution of 8-10% sodium carbonate and 2% liquid detergent in water (10:1 ratio of solution to product). Do not seal container, as CO² will be released. Neutralize in a well-ventilated area for at least 48 hours before sealing containers for disposal.

Section 7 - HANDLING AND STORAGE

Precautions for safe handling

Containers should be kept tightly closed to prevent contact with moisture and other chemicals. Do not reuse empty containers for any purpose. When handling the product, avoid contact with eyes, skin, and

Safety Data Sheet

Material Name: OlyBond 500 BA Part A

Product #: 310476

clothing, using protective equipment as needed. Do not use this product around children, and secure it away from children.

Work and hygiene practices

To prevent ingestion or contact following use of the product, wash hands and face before eating, drinking, applying cosmetics, or using tobacco. Remove contaminated clothing and protective equipment before entering eating/drinking areas.

Storage precautions

Keep containers tightly sealed during storage. Store in a dry, well-ventilated area away from sources of ignition and incompatible materials (see Section #10). Recommended temperature range for storage is 55-85°F. (12.8-29.4°C.).

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls

Use appropriate ventilation (dilution or local exhaust) whenever natural ventilation is restricted or inadequate to maintain concentrations of all components within their applicable standards.

Eye/face protection

Wear eye protection adequate to prevent eye contact with the product. Plastic-frame spectacles with side shields, chemical goggles, or a face shield are recommended. Do not wear contact lenses when working with this product.

Skin protection

Wear protective gloves and clothing to prevent skin irritation or injury from contact with the product. Glove materials known to be effective against permeation by isocyanates include butyl rubber, nitrile rubber, and polychloroprene.

Respiratory protection

If an exposure level to a component exceeds an applicable standard, use a NIOSH-approved respirator of a class and configuration effective for protection from the component(s) generated. Where exposures exceed the OSHA Permissible Exposure Limit (PEL), an airline respirator or self-contained breathing apparatus (SCBA) is recommended. Consult OSHA regulations (29CFR1910.134) and/or American National Standard Z88.2 (ANSI, New York, NY 10036, USA) for guidance.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Dark brown liquid	Physical State	Liquid
Odor	Aromatic	Color	Dark brown
Odor Threshold	Not determined	pH	Not applicable
Melting Point	Not determined	Boiling Point	≥200°F/93°C
Freezing point	Not determined	Evaporation Rate	Not determined
Boiling Point Range	Not determined	Flammability (solid, gas)	Flammable
Autoignition	Not determined	Flash Point	approx. 484°F/220°C

Safety Data Sheet

Material Name: OlyBond 500 BA Part A

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Lower Explosive Limit	Not determined	Decomposition	Not determined
Upper Explosive Limit	Not determined	Vapor Pressure	Not determined
Vapor Density (air=1)	Not determined	Specific Gravity (water=1)	Not determined
Water Solubility	Reactive	Partition coefficient: n-octanol/water	Not determined
Viscosity	150-350 cps	Solubility (Other)	Not determined
Density	approx. 1.22		

Section 10 - STABILITY AND REACTIVITY

Stability

Stable

Reactivity

May react with water and incompatible materials.

Hazardous Polymerization

May occur at temperatures >392°F/200°C

Risk of Dangerous Reactions

None reasonably foreseeable.

Incompatible Materials

Water, alcohols, acids, alkalis, and amines.

Potential decomposition byproducts

Carbon monoxide, carbon dioxide, nitrogen oxides, isocyanates, and hydrogen cyanide.

Section 11 - TOXICOLOGICAL INFORMATION

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Diphenylmethane Diisocyanate Mixed Isomers (26447-40-5)

Oral LD50 Rat >5,000 mg/kg

Inhalation LC50 Rat 2,240 mg/m³ 1 hr

4,4'-Methylene Bisphenyl Isocyanate (101-68-8)

Oral LD50 Rat >5,000 mg/kg

Inhalation LC50 Rat 2,240 mg/m³ 1 hr

Primary route(s) of entry

Inhalation; ingestion

Safety Data Sheet

Material Name: OlyBond 500 BA Part A

Product #: 310476

Eye

This product may cause moderate to severe eye irritation.

Skin

This product may cause mild to moderate skin irritation and has the potential to cause skin sensitization among susceptible individuals.

Ingestion

The product is nontoxic by ingestion, but ingestion may cause nausea, vomiting, and/or gastrointestinal irritation.

Inhalation

Inhalation of toxicologically-significant quantities of ingredients is unlikely when the product is used in a well-ventilated area and in accordance with instructions.

Symptoms related to overexposure

Inhalation overexposure to isocyanates may cause respiratory irritation, breathing difficulties, and asthma-like symptoms.

Delayed effects from long-term overexposure

Long-term inhalation overexposure to this product may result in respiratory sensitization, which may be irreversible.

Carcinogenicity

A single inhalation study exposing rats to aerosolized polymeric 4,4'- Methylene Bisphenyl Isocyanate identified a single malignant pulmonary tumor among 60 animals exposed at the highest exposure level. Observations of pulmonary fibrosis and other pathological anomalies in the test animals precluded definitive determination as to the cause(s) of the tumor. Epidemiological studies of humans occupationally exposed to the isocyanates in this product have found no strong association or consistent pattern with respect to carcinogenicity.

Germ cell mutagenicity

No ingredients have been determined to be germ cell mutagens.

Reproductive toxicity

No ingredients have been determined to be damaging to fertility or to the unborn child.

Acute toxicity

No known acute effects.

Section 12 - ECOLOGICAL INFORMATION

Aquatic toxicity

Diphenylmethane Diisocyanate, Isomers and Homologues	26447-40-5
Fish:	LC50 >1,000 mg/l. for 96 h. (zebra fish)
Invertebrate:	EC50 >1,000 mg/l. for 24 h. (daphnia)
Algae:	EC50 >1,640 mg/l. for 72 h.
Microorganisms:	EC50 >100 mg/l. for 3 h. (bacteria)
Terrestrial Organisms:	NOEC=1,000 mg/kg for 14 d. (worms)



Safety Data Sheet

Material Name: OlyBond 500 BA Part A

Product #: 310476

Mobility in soil

No data available.

Ozone depletion potential

This product neither contains nor is manufactured with any ingredients known to deplete the ozone layer.

Section 13 - DISPOSAL CONSIDERATIONS

Waste disposal of substance

Do not discharge waste product into sanitary or storm sewers or allow it to contaminate soil. Empty containers should be decontaminated prior to disposal. Consult applicable Federal, State/Provincial, and local regulations.

Section 14 - TRANSPORT INFORMATION

US DOT information

Not classified as a dangerous good under transport regulations

Sea transport IMDG

Not classified as a dangerous good under transport regulations

Air transportation IATA/ICAO

Not classified as a dangerous good under transport regulations

Section 15 - REGULATORY INFORMATION

TSCA information

All ingredients of this product are listed in the TSCA Registry.

SARA hazard classes

Acute Health Hazard, Chronic Health Hazard, Reactivity Hazard

EPCRA Section 313 notification

This product contains these ingredients in concentrations $\geq 1\%$ (for carcinogens $\geq 0.1\%$) regulated under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 or 40 CFR 372:

1. 4,4'-Methylene Bisphenyl Isocyanate (CASRN 101-68-8)
2. Polymeric Isocyanates (CASRN 9016-87-9)

CERCLA information

Under requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 4,4'-Methylene Bisphenyl Isocyanate (CASRN 101-68-8) has a Reportable Quantity of 5,000 lbs. Any spill or release above this RQ must be reported to the National Response Center (800-424-8802).

Canadian regulatory information

This product has been classified in accordance with Canada's Hazardous Products Regulations (SOR/DORS/2015-15).

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Material Name: OlyBond 500 BA Part A

Product #: 310476

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 2 Fire: 1 Physical Hazard: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 2 Fire: 2 Reactivity: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

New SDS: April 14, 2015

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Safety Data Sheet

Material Name: OlyBond 500 BA Part B

Product #: 310477

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name: OlyBond 500 BA Part B

Product Use: Two-component polyurethane system

Restrictions on Use: For industrial use only

Manufacturer Information

Carlisle SynTec Systems
1285 Ritner Highway
Carlisle, PA 17013
USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200

Eye Irritation – Category 2B

Specific Target Organ Toxicity, Repeated Exposure – Category 2

GHS Label Elements

Symbol(s)



Signal Word

Warning

Hazard Statement

May cause eye irritation.

May cause damage to the kidneys and/or gastrointestinal system through prolonged or repeated exposure.

Precautionary Statements

Do not breathe mist, spray, or vapors.

Wash hands and forearms thoroughly after handling.

Get medical advice/attention if you feel unwell.

IF IN EYES: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Dispose of contents/container in accordance with applicable regulations. The acute toxicities of <25% of the product's ingredients are unknown.

Emergency overview

Eye contact with this product may cause irritation. Chronic ingestion may damage the kidneys and/or gastrointestinal system. There are no known serious health effects from inhalation or skin contact. See

Safety Data Sheet

Material Name: OlyBond 500 BA Part B

Product #: 310477

Section #7 for recommendations on proper handling and work practices, and Section #8 for recommendations on personal protective equipment.

This product is formulated to be mixed with another component (OlyBond 500 Bag in Box Green, Part 1) that, if handled improperly, may cause potentially serious health effects such as respiratory irritation, asthma-like symptoms, and/or respiratory sensitization. Do not handle or mix the two components together until you have read and understood that information in the Safety Data Sheets for both components.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
111-46-6	Diethylene Glycol	<10
25265-71-8	Dipropylene Glycol	<10

Section 4 - FIRST AID MEASURES

Eyes

Hold eyes open and flush with lukewarm water for at least 15 minutes. Seek immediate medical assistance.

Skin

Remove contaminated clothing. Wash affected areas with soap and water for at least five minutes. If irritation occurs or persists, seek medical attention. Launder or dry-clean clothing before reuse.

Ingestion

DO NOT induce vomiting. If the subject is conscious, wash mouth and give 2 or more cups of milk or water. Seek immediate medical assistance. Do not attempt to give anything by mouth to an unconscious or convulsive person.

Inhalation

If signs and symptoms of respiratory toxicity are observed, remove subject from area and seek immediate medical attention. Keep the subject warm and at rest. If necessary, administer oxygen or perform artificial respiration if necessary and qualified personnel are available to do so.

Note to physician

None of the components of this product are acutely toxic by ingestion or inhalation. Eye contact can cause mild to moderate irritation. Skin contact can cause mild irritation. Ingestion is unlikely to occur in industrial use, but if ingestion occurs it may cause nausea, vomiting, and gastrointestinal irritation. Chronic ingestion can cause kidney injury.

Section 5 – FIRE FIGHTING MEASURES

Extinguishing Media

Water spray, carbon dioxide, dry chemical or chemical foam. DO NOT use water jet.

Safety Data Sheet

Material Name: OlyBond 500 BA Part B

Product #: 310477

Fire and Explosion Hazards

This product may ignite if exposed to sources of ignition at temperatures above its flash point. If present in a fire or explosion, potential thermal decomposition byproducts include carbon monoxide, smoke, and irritant decomposition byproducts.

Advice for firefighters

If fighting a fire in which this product is present, wear a self-contained breathing apparatus with full-facepiece operated in pressure-demand or other positive pressure mode.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes, and mucous membranes. Wear appropriate personal protective equipment (see Section #8) during cleanup and decontamination.

Environmental precautions

Prevent spills from entering sewers or contaminating soil.

Methods and material for containment and cleaning up

Absorb spilled material with a sorbent such as sawdust, vermiculite, or calcium silicate hydrate. When absorbed, transfer to an impervious container.

Section 7 - HANDLING AND STORAGE

Precautions for safe handling

Containers should be kept tightly closed to prevent contact with moisture and other chemicals. Do not reuse empty containers for any purpose. When handling the product, avoid contact with eyes, skin, and clothing, using protective equipment as needed. Do not use this product around children, and secure it away from children.

Work and hygiene practices

To prevent ingestion or contact following use of the product, wash hands and face before eating, drinking, applying cosmetics, or using tobacco. Remove contaminated clothing and protective equipment before entering eating/drinking areas.

Storage precautions

Keep containers tightly sealed during storage. Store in a dry, well-ventilated area away from sources of ignition and incompatible materials (see Section #10). Recommended temperature range for storage is 55-85°F. (12.8-29.4°C.).

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls

Use appropriate ventilation (dilution or local exhaust) whenever this product is used in conjunction with OlyBond 500 BA Bag in a Box Part A in conditions where natural ventilation is restricted.

Eye/face protection

Wear eye protection adequate to prevent eye contact with the product. Plastic-frame spectacles with side shields, chemical goggles, or a face shield are recommended. Do not wear contact lenses when working with this product.

Safety Data Sheet

Material Name: OlyBond 500 BA Part B

Product #: 310477

Skin protection

Wear protective gloves and clothing to prevent skin irritation or injury from contact with the product. Glove materials known to be effective against permeation by this product include butyl rubber, nitrile rubber, and polyvinyl alcohol.

Respiratory protection

If an exposure level to a component exceeds an applicable standard, use a NIOSH-approved respirator of a class and configuration effective for protection from the component(s) generated. Consult OSHA regulations (29CFR1910.134) and/or American National Standard Z88.2 (ANSI, New York, NY 10036, USA) for guidance.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Green viscous liquid	Physical State	Liquid
Odor	Mildly sweet	Color	Green
Odor Threshold	Not determined	pH	Not applicable
Melting Point	Not determined	Boiling Point	Not determined
Freezing point	Not determined	Evaporation Rate	Not determined
Boiling Point Range	Not determined	Flammability (solid, gas)	Flammable
Autoignition	Not determined	Flash Point	approx. 375°F/191°C
Lower Explosive Limit	Not determined	Decomposition	Not determined
Upper Explosive Limit	Not determined	Vapor Pressure	Not determined
Vapor Density (air=1)	Not determined	Specific Gravity (water=1)	Not determined
Water Solubility	Partial	Partition coefficient: n-octanol/water	Not determined
Viscosity	390-530 cps	Solubility (Other)	Not determined
Density	approx. 1.02		

Section 10 - STABILITY AND REACTIVITY

Stability

Stable

Reactivity

Polymerizes with isocyanate-containing substances.

Hazardous Polymerization

Will not occur.

Safety Data Sheet

Material Name: OlyBond 500 BA Part B

Product #: 310477

Risk of Dangerous Reactions

None reasonably foreseeable.

Incompatible Materials

Oxidizing agents.

Potential decomposition byproducts

Carbon monoxide, carbon dioxide, smoke, and irritant decomposition byproducts.

Section 11 - TOXICOLOGICAL INFORMATION

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Diethylene Glycol (111-46-6)

Oral LD50 Rat 14,850 mg/kg

Dermal LD50 Hamster 11,890 mg/kg

Dipropylene Glycol (25265-71-8)

Oral LD50 Rat 12,565 mg/kg

Dermal LD50 Rabbit >20,000 mg/kg

Primary route(s) of entry

Inhalation; ingestion

Eye

This product may cause mild to moderate eye irritation.

Skin

This product may cause mild skin irritation. Irritation may be more pronounced on abraded skin.

Ingestion

The product is nontoxic by ingestion, but ingestion may cause nausea, vomiting, and/or gastrointestinal irritation.

Inhalation

Inhalation of toxicologically-significant quantities of ingredients is unlikely when the product is used in a well-ventilated area and in accordance with instructions.

Symptoms related to overexposure

Inhalation overexposure may cause respiratory irritation.

Delayed effects from long-term overexposure

Long-term chronic ingestion may damage the kidneys and the gastrointestinal system.

Carcinogenicity

No ingredients are classified as potential or confirmed human carcinogens by OSHA, NTP, or IARC.

Germ cell mutagenicity

No ingredients have been determined to be germ cell mutagens.

Reproductive toxicity

No ingredients have been determined to be damaging to fertility or to the unborn child.

Acute toxicity

LD50 (oral): >10,000 mg/kg

LD50 (dermal): >10,000 mg/kg

Safety Data Sheet

Material Name: OlyBond 500 BA Part B

Product #: 310477

LC50 (inhalation) no data available
Interactive effects of components: no data available.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

No ecotoxicity data are available for the product or its components.

Ozone depletion potential

This product neither contains nor is manufactured with any ingredients known to deplete the ozone layer.

Section 13 - DISPOSAL CONSIDERATIONS

Waste disposal of substance

Do not discharge waste product into sanitary or storm sewers or allow it to contaminate soil. Empty containers should be decontaminated prior to disposal. Consult applicable Federal, State/Provincial, and local regulations.

Section 14 - TRANSPORT INFORMATION

US DOT information

Not classified as a dangerous good under transport regulations

Sea transport IMDG

Not classified as a dangerous good under transport regulations

Air transportation IATA/ICAO

Not classified as a dangerous good under transport regulations

Section 15 - REGULATORY INFORMATION

TSCA information

All ingredients of this product are listed in the TSCA Registry.

SARA hazard classes

Acute Health Hazard, Chronic Health Hazard

EPCRA Section 313 notification

This product contains no ingredients in concentrations >1% (>0.1% for carcinogens) regulated under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 or 40 CFR 372

Canadian regulatory information

This product has been classified in accordance with Canada's Hazardous Products Regulations (SOR/DORS/2015-15).

Safety Data Sheet

Material Name: OlyBond 500 BA Part B

Product #: 310477

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 1 Fire: 1 Physical Hazard: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 1 Fire: 1 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

New SDS: April 14, 2015

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Safety Data Sheet

Material Name: OlyBond 500 SpotShot Winter Grade Part A

Product #: 308722A

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name: OlyBond 500 SpotShot Winter Grade Part A

Product Use: Two-component polyurethane system

Restrictions on Use: For industrial use only

Manufacturer Information

Carlisle SynTec Systems
1285 Ritner Highway
Carlisle, PA 17013
USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Acute Toxicity, Inhalation – Category 4

Respiratory Sensitization – Category 1

Skin Sensitization – Category 1

Skin Irritation – Category 2

Eye Irritation – Category 2A

Specific Target Organ Toxicity, Single Exposure – Category 3

Specific Target Organ Toxicity, Repeated Exposure – Category 2

GHS Label Elements

Symbol(s)



Signal Word

Danger

Hazard Statement

May be harmful if inhaled, and may cause allergy or asthma symptoms, breathing difficulties, and/or respiratory irritation.

May cause an allergic skin reaction.

May cause skin irritation and serious eye irritation.

May cause damage to the respiratory system and/or skin through prolonged or repeated exposure.

Precautionary Statements

Do not breathe mist, spray, or vapors.

Use only outdoors or in a well-ventilated area.

In case of inadequate ventilation wear proper respiratory protection.

Wear protective gloves and eye/face protection.

Safety Data Sheet

Material Name: OlyBond 500 SpotShot Winter Grade Part A

Product #: 308722A

Wash hands and forearms thoroughly after handling.
Get medical advice/attention if you feel unwell.

IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms or if you feel unwell, call a doctor or Poison Control Center.

IF ON SKIN: Wash with plenty of water. Take off contaminated clothing and wash before reuse. Contaminated work clothing must not be allowed out of the workplace. If skin irritation or rash occurs, get medical advice/attention.

IF IN EYES: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Store locked up in a well-ventilated place. Keep container tightly closed. Dispose of contents/container in accordance with applicable regulations. The acute toxicities of 25-28% of the product's ingredients are unknown.

Emergency overview

Overexposure to components of this product by inhalation may cause respiratory irritation, asthma-like symptoms, and/or respiratory sensitization. The supplier has conducted an exposure assessment under representative working conditions, and has determined that exposure in excess of the OSHA Permissible Exposure Limit is not likely when the product is used in an outdoor environment in accordance with instructions and safe work practices.

Skin contact may cause irritation and/or allergy-like symptoms, and eye contact may cause severe irritation. Avoid skin and eye contact, using proper personal protective equipment as needed. See Section #7 for recommendations on proper handling and work practices, and Section #8 for recommendations on personal protective equipment.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
26447-40-5	Diphenylmethane Diisocyanate Mixed Isomers	<3.5
101-68-8	4,4'-Methylene Bisphenyl Isocyanate	30 ± 1
9016-87-9	Polymeric Isocyanates	<40

Section 4 - FIRST AID MEASURES

Eyes

Hold eyes open and flush with lukewarm water for at least 15 minutes. Seek immediate medical assistance.

Skin

Remove contaminated clothing. Wash affected areas with soap and water for at least five minutes. If irritation persists or a rash occurs, seek medical attention. Launder or dry-clean clothing before reuse.

Ingestion

DO NOT induce vomiting. If the subject is conscious, wash mouth and give 2 or more cups of milk or water. Seek immediate medical assistance. Do not attempt to give anything by mouth to an unconscious or convulsive person.

Safety Data Sheet

Material Name: OlyBond 500 SpotShot Winter Grade Part A

Product #: 308722A

Inhalation

If signs and symptoms of respiratory toxicity are observed, remove subject from area and seek immediate medical attention. Keep the subject warm and at rest. If necessary, administer oxygen or perform artificial respiration if necessary and qualified personnel are available to do so.

Note to physician

Inhalation exposure can irritate the respiratory tract and induce respiratory sensitization. Treatment of acute irritation and bronchial constriction should be done according to symptoms. Eye contact can cause moderate to severe irritation. Skin contact can cause moderate irritation, and may elicit an allergic response among susceptible individuals. Treat eye and skin irritation or injury according to symptoms. Extended medical treatment may be necessary for individuals exhibiting respiratory sensitization and/or skin disorders.

Section 5 – FIRE FIGHTING MEASURES

Extinguishing Media

Water spray, carbon dioxide, dry chemical or chemical foam. DO NOT use water jet.

Fire and Explosion Hazards

This product may ignite if exposed to sources of ignition at temperatures in excess of its flash point. If present in a fire or explosion, potential thermal decomposition byproducts include carbon monoxide, oxides of nitrogen, organic isocyanates, and hydrogen cyanide.

Advice for firefighters

If fighting a fire in which this product is present, wear a self-contained breathing apparatus with full-facepiece operated in pressure-demand or other positive pressure mode.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes, and mucous membranes. Wear appropriate personal protective equipment (see Section #8) during cleanup and decontamination. Restrict unauthorized personnel during cleanup and disposal operations.

Environmental precautions

Prevent spills from entering sewers or contaminating soil.

Methods and material for containment and cleaning up

Absorb spilled material with a sorbent such as sawdust or calcium silicate hydrate. When absorbed, transfer to an impervious container. Neutralize with solution of 8-10% sodium carbonate and 2% liquid detergent in water (10:1 ratio of solution to product). Do not seal container, as CO² will be released. Neutralize in a well-ventilated area for at least 48 hours before sealing containers for disposal.

Section 7 - HANDLING AND STORAGE

Precautions for safe handling

Containers should be kept tightly closed to prevent contact with moisture and other chemicals. Do not reuse empty containers for any purpose. When handling the product, avoid contact with eyes, skin, and



Safety Data Sheet

Material Name: OlyBond 500 SpotShot Winter Grade Part A

Product #: 308722A

clothing, using protective equipment as needed. Do not use this product around children, and secure it away from children.

Work and hygiene practices

To prevent ingestion or contact following use of the product, wash hands and face before eating, drinking, applying cosmetics, or using tobacco. Remove contaminated clothing and protective equipment before entering eating/drinking areas.

Storage precautions

Keep containers tightly sealed during storage. Store in a dry, well-ventilated area away from sources of ignition and incompatible materials (see Section #10). Recommended temperature range for storage is 55-85°F. (12.8-29.4°C.).

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component exposure limits

4,4'-Methylene Bisphenyl Isocyanate	101-68-8
OSHA PEL	0.02 ppm "C"
ACGIH TLV	0.005 ppm TWA

Biological limit value

There are no biological limit values for any of this product's components.

Engineering controls

Use appropriate ventilation (dilution or local exhaust) whenever natural ventilation is restricted or inadequate to maintain concentrations of all components within their applicable standards.

Eye/face protection

Wear eye protection adequate to prevent eye contact with the product. Plastic-frame spectacles with side shields, chemical goggles, or a face shield are recommended. Do not wear contact lenses when working with this product.

Skin protection

Wear protective gloves and clothing to prevent skin irritation or injury from contact with the product. Glove materials known to be effective against permeation by isocyanates include butyl rubber, nitrile rubber, and polychloroprene.

Respiratory protection

If an exposure level to a component exceeds an applicable standard, use a NIOSH-approved respirator of a class and configuration effective for protection from the component(s) generated. Where exposures exceed the OSHA Permissible Exposure Limit (PEL), an airline respirator or self-contained breathing apparatus (SCBA) is recommended. Consult OSHA regulations (29CFR1910.134) and/or American National Standard Z88.2 (ANSI, New York, NY 10036, USA) for guidance.

Safety Data Sheet

Material Name: OlyBond 500 SpotShot Winter Grade Part A

Product #: 308722A

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Brown liquid	Physical State	Liquid
Odor	Aromatic	Color	Brown
Odor Threshold	Not determined	pH	Not applicable
Melting Point	Not determined	Boiling Point	≥200°F/93°C
Freezing point	Not determined	Evaporation Rate	Not determined
Boiling Point Range	Not determined	Flammability (solid, gas)	Flammable
Autoignition	Not determined	Flash Point	approx. 484°F/220°C
Lower Explosive Limit	Not determined	Decomposition	Not determined
Upper Explosive Limit	Not determined	Vapor Pressure	Not determined
Vapor Density (air=1)	Not determined	Specific Gravity (water=1)	Not determined
Water Solubility	Reactive	Partition coefficient: n-octanol/water	Not determined
Viscosity	300 cps	Solubility (Other)	Not determined
Density	approx. 1.2		

Section 10 - STABILITY AND REACTIVITY

Stability

Stable

Reactivity

May react with water and incompatible materials.

Hazardous Polymerization

May occur at temperatures >392°F/200°C

Risk of Dangerous Reactions

None reasonably foreseeable.

Incompatible Materials

Water, alcohols, acids, alkalis, and amines.

Potential decomposition byproducts

Carbon monoxide, carbon dioxide, nitrogen oxides, isocyanates, and hydrogen cyanide.

Safety Data Sheet

Material Name: OlyBond 500 SpotShot Winter Grade Part A

Product #: 308722A

Section 11 - TOXICOLOGICAL INFORMATION

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Diphenylmethane Diisocyanate Mixed Isomers (26447-40-5)

Oral LD50 Rat >5,000 mg/kg

Inhalation LC50 Rat 2,240 mg/m³ 1 hr

4,4'-Methylene Bisphenyl Isocyanate (101-68-8)

Oral LD50 Rat >5,000 mg/kg

Inhalation LC50 Rat 2,240 mg/m³ 1 hr

Primary route(s) of entry

Inhalation; ingestion

Eye

This product may cause moderate to severe eye irritation.

Skin

This product may cause mild to moderate skin irritation and has the potential to cause skin sensitization among susceptible individuals.

Ingestion

The product is nontoxic by ingestion, but ingestion may cause nausea, vomiting, and/or gastrointestinal irritation.

Inhalation

Inhalation of toxicologically-significant quantities of ingredients is unlikely when the product is used in a well-ventilated area and in accordance with instructions.

Symptoms related to overexposure

Inhalation overexposure to isocyanates may cause respiratory irritation, breathing difficulties, and asthma-like symptoms.

Delayed effects from long-term overexposure

Long-term inhalation overexposure to this product may result in respiratory sensitization, which may be irreversible.

Carcinogenicity

A single inhalation study exposing rats to aerosolized polymeric 4,4'- Methylene Bisphenyl Isocyanate identified a single malignant pulmonary tumor among 60 animals exposed at the highest exposure level. Observations of pulmonary fibrosis and other pathological anomalies in the test animals precluded definitive determination as to the cause(s) of the tumor. Epidemiological studies of humans occupationally exposed to the isocyanates in this product have found no strong association or consistent pattern with respect to carcinogenicity.

Germ cell mutagenicity

No ingredients have been determined to be germ cell mutagens.

Reproductive toxicity

No ingredients have been determined to be damaging to fertility or to the unborn child.

Acute toxicity

No known acute effects.

Safety Data Sheet

Material Name: OlyBond 500 SpotShot Winter Grade Part A

Product #: 308722A

Section 12 - ECOLOGICAL INFORMATION

Aquatic toxicity

Diphenylmethane Diisocyanate, Isomers and Homologues	26447-40-5
Fish:	LC50 >1,000 mg/l. for 96 h. (zebra fish)
Invertebrate:	EC50 >1,000 mg/l. for 24 h. (daphnia)
Algae:	EC50 >1,640 mg/l. for 72 h.
Microorganisms:	EC50 >100 mg/l. for 3 h. (bacteria)
Terrestrial Organisms:	NOEC=1,000 mg/kg for 14 d. (worms)

Mobility in soil

No data available.

Ozone depletion potential

This product neither contains nor is manufactured with any ingredients known to deplete the ozone layer.

Section 13 - DISPOSAL CONSIDERATIONS

Waste disposal of substance

Do not discharge waste product into sanitary or storm sewers or allow it to contaminate soil. Empty containers should be decontaminated prior to disposal. Consult applicable Federal, State/Provincial, and local regulations.

Section 14 - TRANSPORT INFORMATION

US DOT information

Not classified as a dangerous good under transport regulations

Sea transport IMDG

Not classified as a dangerous good under transport regulations

Air transportation IATA/ICAO

Not classified as a dangerous good under transport regulations

Section 15 - REGULATORY INFORMATION

TSCA information

All ingredients of this product are listed in the TSCA Registry.

SARA hazard classes

Acute Health Hazard, Chronic Health Hazard, Reactivity Hazard



Safety Data Sheet

Material Name: OlyBond 500 SpotShot Winter Grade Part A

Product #: 308722A

EPCRA Section 313 notification

This product contains these ingredients in concentrations $\geq 1\%$ (for carcinogens $\geq 0.1\%$) regulated under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 or 40 CFR 372:

1. 4,4'-Methylene Bisphenyl Isocyanate (CASRN 101-68-8)
2. Polymeric Isocyanates (CASRN 9016-87-9)

CERCLA information

Under requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 4,4'-Methylene Bisphenyl Isocyanate (CASRN 101-68-8) has a Reportable Quantity of 5,000 lbs. Any spill or release above this RQ must be reported to the National Response Center (800-424-8802).

Canadian regulatory information

This product has been classified in accordance with Canada's Hazardous Products Regulations (SOR/DORS/2015-15).

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 2 Fire: 1 Physical Hazard: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 2 Fire: 2 Reactivity: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

New SDS: April 14, 2015

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH - Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.



Safety Data Sheet

Material Name: OlyBond 500 SpotShot Winter Grade Part A

Product #: 308722A

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Safety Data Sheet

Material Name: OlyBond 500 SpotShot Winter Grade Part B

Product #: 308722B

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name: OlyBond 500 SpotShot Winter Grade Part B

Product Use: Two-component polyurethane system

Restrictions on Use: For industrial use only

Manufacturer Information

Carlisle SynTec Systems
1285 Ritner Highway
Carlisle, PA 17013
USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200

Eye Irritation – Category 2B

Specific Target Organ Toxicity, Repeated Exposure – Category 2

GHS Label Elements

Symbol(s)



Signal Word

Warning

Hazard Statement

May cause eye irritation.

May cause damage to the kidneys and/or gastrointestinal system through prolonged or repeated exposure.

Precautionary Statements

Do not breathe mist, spray, or vapors.

Wash hands and forearms thoroughly after handling.

Get medical advice/attention if you feel unwell.

IF IN EYES: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Dispose of contents/container in accordance with applicable regulations. The acute toxicities of <65% of the product's ingredients are unknown.

Emergency overview

Eye contact with this product may cause irritation. Chronic ingestion may damage the kidneys and/or gastrointestinal system. There are no known serious health effects from inhalation or skin contact. See



Safety Data Sheet

Material Name: OlyBond 500 SpotShot Winter Grade Part B

Product #: 308722B

Section #7 for recommendations on proper handling and work practices, and Section #8 for recommendations on personal protective equipment.

This product is formulated to be mixed with another component (SpotShot Winter, Part A) that, if handled improperly, may cause potentially serious health effects such as respiratory irritation, asthma-like symptoms, and/or respiratory sensitization. Do not handle or mix the two components together until you have read and understood that information in the Safety Data Sheets for both components.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
5285-60-9	4,4'-bis(sec-Butylamino) Diphenylmethane	<10
111-46-6	Diethylene Glycol	<15
25265-71-8	Dipropylene Glycol	<10

Section 4 - FIRST AID MEASURES

Eyes

Hold eyes open and flush with lukewarm water for at least 15 minutes. Seek immediate medical assistance.

Skin

Remove contaminated clothing. Wash affected areas with soap and water for at least five minutes. If irritation occurs or persists, seek medical attention. Launder or dry-clean clothing before reuse.

Ingestion

DO NOT induce vomiting. If the subject is conscious, wash mouth and give 2 or more cups of milk or water. Seek immediate medical assistance. Do not attempt to give anything by mouth to an unconscious or convulsive person.

Inhalation

If signs and symptoms of respiratory toxicity are observed, remove subject from area and seek immediate medical attention. Keep the subject warm and at rest. If necessary, administer oxygen or perform artificial respiration if necessary and qualified personnel are available to do so.

Note to physician

None of the components of this product are acutely toxic by ingestion or inhalation. Eye contact can cause mild to moderate irritation. Skin contact can cause mild irritation. Ingestion is unlikely to occur in industrial use, but if ingestion occurs it may cause nausea, vomiting, and gastrointestinal irritation. Chronic ingestion can cause kidney injury.

Section 5 – FIRE FIGHTING MEASURES

Extinguishing Media

Water spray, carbon dioxide, dry chemical or chemical foam. DO NOT use water jet.

Safety Data Sheet

Material Name: OlyBond 500 SpotShot Winter Grade Part B

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Fire and Explosion Hazards

This product may ignite if exposed to sources of ignition at temperatures above its flash point. If present in a fire or explosion, potential thermal decomposition byproducts include carbon monoxide, smoke, and irritant decomposition byproducts.

Advice for firefighters

If fighting a fire in which this product is present, wear a self-contained breathing apparatus with full-facepiece operated in pressure-demand or other positive pressure mode.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes, and mucous membranes. Wear appropriate personal protective equipment (see Section #8) during cleanup and decontamination.

Environmental precautions

Prevent spills from entering sewers or contaminating soil.

Methods and material for containment and cleaning up

Absorb spilled material with a sorbent such as sawdust, vermiculite, or calcium silicate hydrate. When absorbed, transfer to an impervious container.

Section 7 - HANDLING AND STORAGE

Precautions for safe handling

Containers should be kept tightly closed to prevent contact with moisture and other chemicals. Do not reuse empty containers for any purpose. When handling the product, avoid contact with eyes, skin, and clothing, using protective equipment as needed. Do not use this product around children, and secure it away from children.

Work and hygiene practices

To prevent ingestion or contact following use of the product, wash hands and face before eating, drinking, applying cosmetics, or using tobacco. Remove contaminated clothing and protective equipment before entering eating/drinking areas.

Storage precautions

Keep containers tightly sealed during storage. Store in a dry, well-ventilated area away from sources of ignition and incompatible materials (see Section #10). Recommended temperature range for storage is 55-85°F. (12.8-29.4°C.).

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits

No exposure limits noted for ingredient(s).

Biological limit value

There are no biological limit values for any of this product's components.

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Engineering controls

Use appropriate ventilation (dilution or local exhaust) whenever this product is used in conjunction with Spot Shot Winter Part 1 in conditions where natural ventilation is restricted.

Eye/face protection

Wear eye protection adequate to prevent eye contact with the product. Plastic-frame spectacles with side shields, chemical goggles, or a face shield are recommended. Do not wear contact lenses when working with this product.

Skin protection

Wear protective gloves and clothing to prevent skin irritation or injury from contact with the product. Glove materials known to be effective against permeation by this product include butyl rubber, nitrile rubber, and polyvinyl alcohol.

Respiratory protection

If an exposure level to a component exceeds an applicable standard, use a NIOSH-approved respirator of a class and configuration effective for protection from the component(s) generated. Consult OSHA regulations (29CFR1910.134) and/or American National Standard Z88.2 (ANSI, New York, NY 10036, USA) for guidance.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Red viscous liquid	Physical State	Liquid
Odor	Mildly sweet	Color	Red
Odor Threshold	Not determined	pH	Not applicable
Melting Point	Not determined	Boiling Point	Not determined
Freezing point	Not determined	Evaporation Rate	Not determined
Boiling Point Range	Not determined	Flammability (solid, gas)	Flammable
Autoignition	Not determined	Flash Point	approx. 375°F/191°C
Lower Explosive Limit	Not determined	Decomposition	Not determined
Upper Explosive Limit	Not determined	Vapor Pressure	Not determined
Vapor Density (air=1)	Not determined	Specific Gravity (water=1)	Not determined
Water Solubility	Partial	Partition coefficient: n-octanol/water	Not determined
Viscosity	300 cps	Solubility (Other)	Not determined
Density	approx. 1.02		

Safety Data Sheet

Material Name: OlyBond 500 SpotShot Winter Grade Part B

Product #: 308722B

Section 10 - STABILITY AND REACTIVITY

Stability

Stable

Reactivity

Polymerizes with isocyanate-containing substances.

Hazardous Polymerization

Will not occur.

Risk of Dangerous Reactions

None reasonably foreseeable.

Incompatible Materials

Oxidizing agents.

Potential decomposition byproducts

Carbon monoxide, carbon dioxide, smoke, and irritant decomposition byproducts.

Section 11 - TOXICOLOGICAL INFORMATION

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

4,4'-bis(sec-Butylamino) Diphenylmethane (5285-60-9)

Oral LD50 Rat 1,380 mg/kg

Dermal LD50 Rabbit 3,090 mg/kg

Diethylene Glycol (111-46-6)

Oral LD50 Rat 14,850 mg/kg

Dermal LD50 Hamster 11,890 mg/kg

Dipropylene Glycol (25265-71-8)

Oral LD50 Rat 12,565 mg/kg

Dermal LD50 Rabbit >20,000 mg/kg

Primary route(s) of entry

Inhalation; ingestion

Eye

This product may cause mild to moderate eye irritation.

Skin

This product may cause mild skin irritation. Irritation may be more pronounced on abraded skin.

Ingestion

The product is nontoxic by ingestion, but ingestion may cause nausea, vomiting, and/or gastrointestinal irritation.

Inhalation

Inhalation of toxicologically-significant quantities of ingredients is unlikely when the product is used in a well-ventilated area and in accordance with instructions.

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Symptoms related to overexposure

Inhalation overexposure may cause respiratory irritation.

Delayed effects from long-term overexposure

Long-term chronic ingestion may damage the kidneys and the gastrointestinal system.

Carcinogenicity

No ingredients are classified as potential or confirmed human carcinogens by OSHA, NTP, or IARC.

Germ cell mutagenicity

No ingredients have been determined to be germ cell mutagens.

Reproductive toxicity

No ingredients have been determined to be damaging to fertility or to the unborn child.

Acute toxicity

LD50 (oral): >2,500 mg/kg

LD50 (dermal): >5,000mg/kg

LC50 (inhalation) no data available

Interactive effects of components: no data available.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

No ecotoxicity data are available for the product or its components.

Ozone depletion potential

This product neither contains nor is manufactured with any ingredients known to deplete the ozone layer.

Section 13 - DISPOSAL CONSIDERATIONS

Waste disposal of substance

Do not discharge waste product into sanitary or storm sewers or allow it to contaminate soil. Empty containers should be decontaminated prior to disposal. Consult applicable Federal, State/Provincial, and local regulations.

Section 14 - TRANSPORT INFORMATION

US DOT information

Not classified as a dangerous good under transport regulations

Sea transport IMDG

Not classified as a dangerous good under transport regulations

Air transportation IATA/ICAO

Not classified as a dangerous good under transport regulations

Section 15 - REGULATORY INFORMATION

TSCA information

All ingredients of this product are listed in the TSCA Registry.



Safety Data Sheet

Material Name: OlyBond 500 SpotShot Winter Grade Part B

Product #: 308722B

SARA hazard classes

Acute Health Hazard, Chronic Health Hazard

EPCRA Section 313 notification

This product contains no ingredients in concentrations >1% (>0.1% for carcinogens) regulated under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 or 40 CFR 372

Canadian regulatory information

This product has been classified in accordance with Canada's Hazardous Products Regulations (SOR/DORS/2015-15).

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 1 Fire: 1 Physical Hazard: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 1 Fire: 1 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

New SDS: April 14, 2015

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.



Safety Data Sheet

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Product #: 308722B

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name:

Carlisle One Step Foamable Adhesive

Synonym:

Diphenylmethane Diisocyanate

Product Use:

Two-part adhesive for roofing systems

Restrictions on Use:

For industrial use only

Manufacturer Information

Carlisle SynTec
1285 Ritner Highway
Carlisle, PA 17013
USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Respiratory Sensitization – Category 1
Acute Toxicity – Category 4
Skin Corrosive/Irritation – Category 2
Eye Damage/Irritation – Category 2A
Skin Sensitivity – Category 1
Specific Target Organ Toxicity - Single Exposure – Category 3

GHS Label Elements

Symbol(s)



Signal Word

Danger

Hazard Statement:

Harmful if inhaled.
Causes skin irritation
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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Material Name: Carlisle One Step Foamable Adhesive Part 1

Product #: 307464

May cause an allergic skin reaction.
May cause respiratory irritation.

Precautionary Statements (Prevention):

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Wear respiratory protection.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves.
Wear eye protection / face protection.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.

Precautionary Statements (Response):

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Specific treatment (see on this label).
If experiencing respiratory symptoms: Call a poison center/doctor.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a poison center/doctor if you feel unwell.
Wash contaminated clothing before reuse.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
If on skin: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.

Precautionary Statements (Storage):

Store locked up.
Store in a well-ventilated place. Keep container tightly closed.

Precautionary Statements (Disposal):

Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazards not otherwise classified

No specific dangers known, if the regulations/notes for storage and handling are considered.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	25-50
101-68-8	4,4'-methylenediphenyl diisocyanate	25-50
	Polyol	10-25

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26447-40-5	methylenediphenyl diisocyanate	2.5-10
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There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to the health or the environment and hence require reporting in this section.

Section 4 - FIRST AID MEASURES

GENERAL ADVICE: Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

EYES: Rinse opened eye for 20 minutes under running water. Call a Doctor immediately.

SKIN: If skin becomes irritated seek medical attention. Immediately wash with water and soap and rinse thoroughly.

INGESTION: Rinse out mouth with water. Drink 1 - 2 glasses of water but DO NOT induce vomiting. Do not give liquids to a drowsy, convulsing or unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Seek medical treatment.

INHALATION: Supply fresh air and to be sure call for a doctor. In case of unconsciousness, place patient stably in side position for transportation. Call a doctor immediately. Overexposure, remove to fresh air and seek medical attention.

Most important symptoms and effects, both acute and delayed

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable methods of extinction: CO₂, sand, extinguishing powder. Do not use water. Use fire fighting measures that suit the environment.

Unsuitable methods of extinction: Water

Special hazards arising from the substance or mixture: No further relevant information available.

Advice for Firefighters

Protective equipment: Mouth respiratory protective device. Protective clothing and respiratory protective device.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Keep away from ignition sources.

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Environmental precautions

No special measures required.

Methods and material for containment and cleaning up

Cover spilled material with neutralization solution (see below) and mix. Wait 15 minutes. Collect material in openhead metal containers. Repeat neutralization and cleaning process until surface is decontaminated. Apply drum lid but DO NOT secure. Allow containers to vent for 72 hours to let carbon dioxide escape. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose of contaminated material as waste in accordance with federal state and local regulations. Ensure adequate ventilation.

Reference to other sections

Neutralization solutions:

1. A mixture of 90% water, 3-8% ammonium hydroxide or concentrated ammonia, and 2% liquid detergent.
 2. A mixture of 80% water, 20% non-ionic surfactant.
- See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

Section 7 - HANDLING AND STORAGE

Precautions for safe handling

Avoid prolonged or repeated contact with skin. Avoid contact with eyes. Wash thoroughly after handling. Prevent formation of aerosols.

Protection against fire and explosion:

Product reacts with water. Reaction may produce heat and/or gases.

Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles: Keep containers tightly closed when not in use. Protect from atmospheric moisture.

Information about storage in one common storage facility: Keep away from open flames and high temperatures.

Further information about storage conditions: Storage Temperature - 32F - 90F. Keep receptacle tightly sealed.

Specific end use(s): No further relevant information available.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Additional information about design of technical systems: No further data.

Component Exposure Limits

4,4'-methylenediphenyl diisocyanate	101-68-8
PEL	Ceiling limit value: 0.2 mg/m ³ , 0.02 ppm

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REL	Long-term value: 0.05 mg/m ³ , 0.005 ppm Ceiling limit value: 0.2* mg/m ³ , 0.02* ppm *10-min
TLV	Long-term value: 0.051 mg/m ³ , 0.005 ppm

Additional information: MDI products have poor warning properties, since recognition of an odor is far above the TLV. Observe OSHA regulations for respirator use (29 CFR 1910.134). The lists that were valid during the creation were used as basis.

Personal protective equipment

Respiratory protection:

Use approved respiratory protection equipment when airborne exposure is excessive. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacturer.

Hand protection:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves: Chloroprene rubber, CR, Nitrile rubber, NBR, Butyl rubber, BR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Face Shield
Safety glasses with side shields.

Other Protective Equipment:

Apron
Protective work clothing

Hygiene Measures:

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Light amber to off white liquid	Form	Liquid
Odor	Faint aromatic	Odor threshold	Not available

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Initial Boiling Point and Boiling Range /Boiling Point (@ 5mmHg)	Not available	Flammability Limit	Not available
Melting/Freezing Point (@ 1 ATM)	Not available	Vapor Pressure in container(20°C)	1.12 g/cm ³ (9.346 lbs/gal)
Vapor Pressure of Liquid	0 mm Hg	Partition coefficient: n-octanol/water	Not available
Autoignition	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.	Flash Point	176° C (349° F)
Solubility	Not miscible or difficult to mix	Viscosity	Not available
Vapor Density (air=1)	Not available	Decomposition Temperature	Not available
Oxidizing Properties	Not available	pH	Not available
Relative Density/Specific Gravity	Not available	Evaporation rate:	Not available
Lower Flammability/Explosive Limit	Not available	Upper Flammability/Explosive Limit	Not available

Section 10 - STABILITY AND REACTIVITY

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical Stability

Thermal decomposition / conditions to be avoided: Contact with moisture, other materials that react with isocyanates, or temperatures above 350F (177C), may cause polymerization.

Possibility of Hazardous Reactions

May produce violent reactions with bases and numerous organic substances including alcohols and amines. MDI reacts slowly with water to form Carbon Dioxide gas. This gas can cause sealed containers to expand and possibly rupture. Contact with moisture, other materials that react with isocyanates, or temperatures above 350F, may cause polymerization.

Conditions to Avoid

Exposure to high temperatures. Moisture

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Incompatible Materials

Reacts with amines, caustic alkali solutions, alcohols, ammonia, oxidizers, acids, polyols. Reacts with water forming carbon dioxide-may rupture sealed containers if contaminated with water.

Hazardous decomposition products:

Carbon dioxide, carbon monoxide, oxides of nitrogen, dense black smoke, hydrogen cyanide, isocyanic acid, other undetermined compounds.

Section 11 - TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute Toxicity/Effects

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

4,4'-methylenediphenyl diisocyanate (101-68-8)
Oral LD50 Mouse 2200 mg/kg

Skin irritation

Skin irritant. Irritant to skin and mucous membranes.

Eye irritation

Irritating effect.

Sensitization

Inhalation – Sensitization possible through inhalation.

Skin Contact – Sensitization possible through skin contact.

Additional toxicological information

The product shows the following dangers according to internally approved calculation methods for preparations: Harmful, Irritant

Carcinogenicity

IARC: diphenylmethanediisocyanate, isomers and homologues (9016-87-9); 4,4'-methylenediphenyl diisocyanate (101-68-8)

NTP: None of the ingredients is listed.

OSHA-Ca: None of the ingredients is listed.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Bioaccumulation potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Additional ecological information:

General notes: All present there are no ecotoxicological assessments

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Results of PBT and vPvB assessment:

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects: No further relevant information available.

Section 13 - DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Must be specially treated adhering to official regulations. Disposal must be made according to official regulations.

Uncleaned packagings

Disposal must be made according to official regulations.

Section 14 - TRANSPORT INFORMATION

UN-Number

DOT, ADR, ADN, IMDG, IATA Not regulated

UN proper shipping name

DOT, ADR, ADN, IMDG, IATA Not regulated

Transport hazard class(es)

DOT, ADR, ADN, IMDG, IATA Not regulated

Packing group

DOT, ADR, IMDG, IATA Not regulated

Environmental hazards

Not applicable

Special precautions for user

Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

Transport/Additional information

MDI (CAS 101-68-8) exhibits a CERCLA RQ equal to 5,000 pounds. Quantities less than the RQ amount are not regulated in transportation.

UN "Model Regulation"

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Section 15 - REGULATORY INFORMATION

Safety, health, and environmental regulations/legislations specific for the substance or mixture

SARA Section 355 (extremely hazardous substances): diphenylmethanediisocyanate, isomers and homologues (9016-87-9); 4,4'-methylene diphenyl diisocyanate (101-68-8)

SARA 313 (specific toxic chemical listings): MDI and PMDI are subject to reporting levels established by Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986.

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TSCA (Toxic Substances Control Act): All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986: None of the ingredients listed are known to cause cancer or other reproductive harm.

(DSL) Canada Domestic Substance List: All components of this product are on the DSL (Canada Domestic Substance List) or are exempt from DSL requirements.

Carcinogenicity categories

EPA (Environmental Protection Agency)		
9016-87-9	diphenylmethanediisocyanate, isomers and homologues	CBD
101-68-8	4,4'-methylenediphenyl diisocyanate	D, CBD
TLV (Threshold Limit Value established by ACGIH)		
None of the ingredients listed.		
MAK (German Maximum Workplace Concentration)		
9016-87-9	diphenylmethanediisocyanate, isomers and homologues	4
101-68-8	4,4'-methylenediphenyl diisocyanate	4
NIOSH-Ca (National Institute for Occupational Safety and Health)		
None of the ingredients is listed.		

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 1* Fire: 1 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 1 Fire: 1 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

New SDS: 6/24/2016

Key / Legend

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

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Material Name: Carlisle One Step Foamable Adhesive Part 1

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NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name:

Carlisle One Step Foamable Adhesive Part 2

Synonym:

Polyol Blend

Product Use:

Two-part adhesive for roofing systems

Restrictions on Use:

For industrial use only

Manufacturer Information

Carlisle SynTec
1285 Ritner Highway
Carlisle, PA 17013
USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Skin Corrosive/Irritation – Category 2

Eye Damage/Irritation – Category 2A

Skin Sensitivity – Category 1

GHS Label Elements

Symbol(s)



Signal Word

Warning

Hazard Statement:

Causes skin irritation

Causes serious eye irritation.

May cause an allergic skin reaction.

Precautionary Statements (Prevention):

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Safety Data Sheet

Material Name: Carlisle One Step Foamable Adhesive Part 2

Product #: 307464

Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves.
Wear eye protection / face protection.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.

Precautionary Statements (Response):

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see on this label).
Wash contaminated clothing before reuse.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
If on skin: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.

Precautionary Statements (Disposal):

Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazards not otherwise classified

No specific dangers known, if the regulations/notes for storage and handling are considered.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
67762-90-7	Synthetic Amorphous Silica	≤ 2.5%
1760-24-3	N-(3-(trimethoxysilyl)propyl)ethylenediamine	≤ 2.5%
25265-71-8	oxydipropanol	≤ 2.5%

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to the health or the environment and hence require reporting in this section.

Section 4 - FIRST AID MEASURES

EYES: Rinse opened eye for 20 minutes under running water. If eye becomes irritated, obtain medical treatment.

SKIN: Immediately wash with water and soap and rinse thoroughly.

INGESTION: Rinse out mouth with water. Drink 1 - 2 glasses of water but DO NOT induce vomiting. Do not give liquids to a drowsy, convulsing or unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Seek medical treatment.

Safety Data Sheet

Material Name: Carlisle One Step Foamable Adhesive Part 2

Product #: 307464

INHALATION: Supply fresh air and to be sure call for a doctor. In case of unconsciousness place patient stably in side position for transportation. Call a doctor immediately. Overexposure, remove to fresh air and seek medical attention.

Most important symptoms and effects, both acute and delayed

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable methods of extinction: Use firefighting measures that suit the environment

Special hazards arising from the substance or mixture: Dried solids can burn and release toxic fumes and vapors. No further relevant information available.

Advice for Firefighters

Protective equipment: Protective clothing and respiratory protective device.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

Environmental precautions

Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up

Dispose of contaminated material as waste in accordance with federal state and local regulations.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Section 7 - HANDLING AND STORAGE

Precautions for safe handling

Avoid prolonged or repeated contact with skin. Avoid contact with eyes. Wash thoroughly after handling. Open containers in a well ventilated area and avoid breathing headspace vapors.

Protection against fire and explosion:

No special measures required.

Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Store away from oxidizing agents.

Safety Data Sheet

Material Name: Carlisle One Step Foamable Adhesive Part 2

Product #: 307464

Further information about storage conditions: None.

Specific end use(s): No further relevant information available.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Additional information about design of technical systems: No further data; see item 7.

Component Exposure Limits: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: The lists that were valid during the creation were used as basis.

Personal protective equipment

General protective and hygienic measures:

Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work.

Respiratory protection:

Not necessary if room is well-ventilated.

Hand protection:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves: Nitrile rubber, NBR
Chloroprene rubber, CR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Safety glasses with side shields.

Other Protective Equipment:

Protective work clothing

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colorless liquid	Form	Liquid
Odor	Polyether	Odor threshold	Not available

Safety Data Sheet

Material Name: Carlisle One Step Foamable Adhesive Part 2

Product #: 307464

Initial Boiling Point and Boiling Range /Boiling Point (@ 5mmHg)	Not available	Flammability Limit	Not available
Melting/Freezing Point (@ 1 ATM)	Not available	Vapor Pressure in container(20°C)	Not available
Vapor Pressure of Liquid	Not available	Partition coefficient: n-octanol/water	Not available
Autoignition	Not available	Flash Point	>350° C (662° F)
Solubility	Not available	Viscosity	Not available
Vapor Density (air=1)	Not available	Decomposition Temperature	Not available
Oxidizing Properties	Not available	pH	9-10
Relative Density/Specific Gravity	0.98 g/cm ³ (8.178 lbs/gal)	Evaporation rate:	Not available
Lower Flammability/Explosive Limit	Not available	Upper Flammability/Explosive Limit	Not available

Section 10 - STABILITY AND REACTIVITY

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical Stability

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

Possibility of Hazardous Reactions

No dangerous reactions known.

Conditions to Avoid

Exposure to high temperatures.

Incompatible Materials

Reacts with oxidizing agents.

Hazardous decomposition products:

Carbon monoxide and carbon dioxide tin oxide.

Section 11 - TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute Toxicity/Effects

Safety Data Sheet

Material Name: Carlisle One Step Foamable Adhesive Part 2

Product #: 307464

Skin irritation

Skin irritant.

Eye irritation

May irritate the eye.

Sensitization

Skin Contact - Sensitization possible through skin contact.

Additional toxicological information

The product shows the following dangers according to internally approved calculation methods for preparations: Irritant.

Carcinogenicity

IARC: None of the ingredients is listed.

NTP: None of the ingredients is listed.

OSHA-Ca: None of the ingredients is listed.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Bioaccumulation potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Additional ecological information:

General notes: Water hazard class 1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Results of PBT and vPvB assessment:

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects: No further relevant information available.

Section 13 - DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Must be specially treated adhering to official regulations. Disposal must be made according to official regulations.

Uncleaned Packagings

Disposal must be made according to official regulations.

Recommended Cleansing Agent

Water, if necessary with cleansing agents.

Safety Data Sheet

Material Name: Carlisle One Step Foamable Adhesive Part 2

Product #: 307464

Section 14 - TRANSPORT INFORMATION

UN-Number	
DOT, ADR, ADN, IMDG, IATA	Not regulated
UN proper shipping name	
DOT, ADR, ADN, IMDG, IATA	Not regulated
Transport hazard class(es)	
DOT, ADR, ADN, IMDG, IATA	Not regulated
Packing group	
DOT, ADR, IMDG, IATA	Not regulated
Environmental hazards	Not applicable
Special precautions for user	Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable
UN "Model Regulation"	-

Section 15 - REGULATORY INFORMATION

Safety, health, and environmental regulations/legislations specific for the substance or mixture

SARA Section 355 (extremely hazardous substances): None of the ingredients is listed.

SARA 313 (specific toxic chemical listings): None of the ingredients is listed.

TSCA (Toxic Substances Control Act): All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986: None of the ingredients listed are known to cause cancer or other reproductive harm.

(DSL) Canada Domestic Substance List: All components of this product are on the DSL (Canada Domestic Substance List) or are exempt from DSL requirements.

Carcinogenicity categories

EPA (Environmental Protection Agency): None of the ingredients is listed.

TLV (Threshold Limit Value established by ACGIH): None of the ingredients is listed.

MAK (German Maximum Workplace Concentration): None of the ingredients is listed.

NIOSH-CA (National Institute for Occupational Safety and Health): None of the ingredients is listed.

National regulations

Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

Safety Data Sheet

Material Name: Carlisle One Step Foamable Adhesive Part 2

Product #: 307464

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 0 Fire: 1 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 0 Fire: 1 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

New SDS: 6/24/2016

Key / Legend

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International

Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name: Cold Applied Adhesive

Chemical Family: Mixture

Product Use: Moisture cure sealant.

Restrictions on Use: For industrial use only.

Manufacturer Information

Carlisle SynTec
1285 Ritner Highway
Carlisle, PA 17013
USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Hazardous classification: Irritant Category 2

GHS Label Elements

Symbol(s)



Signal Word: Warning

Hazard Statement(s)

H315 Causes skin irritation
H317 May cause allergic skin reaction
H318 Causes serious eye damage

Precautionary Statement(s)

P273 Avoid release into the environment
P280 Wear protective gloves/protective clothing/eye protection
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 IF IN EYES: Rinse cautiously with water for several minutes.
P338 Remove contact lenses, if present and easy to do. Continue rinsing.
P501 Dispose of contents/container in accordance with local regulation.

Safety Data Sheet

Material Name: Cold Applied Adhesive

Product #: 307780

R-Phrases

R38 Irritating to skin.

R41 Risk serious damage to eyes.

R43 May casue sensitization by skin contact.

S-Phrases

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S39 Wear eye/face protection.

Carcinogenity: This product contains no ingredient listed as a carcinogen on California Proposition 65 list.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
1760-24-3	Amino Silane	1-3

Section 4 - FIRST AID MEASURES

Inhalation

An unlikely route of entry. Remove to fresh air. Consult a physician.

Skin

Clean product from affected area with Ethyl alcohol, then wash with soap and water.

Eyes

Flush with large amounts of water for at least 15 minutes. Consult a Physician if ill effects or irritation occurs.

Ingestion

An unlikely route of entry. Consult a physician.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Water, CO2, Dry Chemical, Foam.

Unusual Fire and Explosion Hazards: None

Flashpoint: N/A.

Upper Falmmability Limit: N/A

Lower Flammability Limit: N/A



Safety Data Sheet

Material Name: Cold Applied Adhesive

Product #: 307780

Auto Ignition Temperature: N/A

Sensitivity to Impact: N/A

Sensitivity to Static Discharge: N/A

Hazardous Combustion Products: Thermal decomposition may produce toxic fumes of Carbon Monoxide, Carbon dioxide, Sulfur oxides and Hydrogen sulfide.

Section 6 - ACCIDENTAL RELEASE MEASURES

Handling Precautions: Wear personal protective clothing and equipment, see Section 8. Avoid eye, skin and clothing contact.

Cleanup: Collect spill with absorbent material such as cardboard, allow to cure and place into a container approved for waste disposal.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - HANDLING AND STORAGE

Handling Precautions: Use personal protection recommended in section 8. Avoid eye, skin and clothing contact.

Prevention of Fires and Explosions: Product is not considered flammable under normal conditions, and product is not considered explosive.

Storage Requirements: Store in a cool dry area (this product polymerizes when in contact with moisture.)

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Eye/face protection: Wear safety glasses or goggles to avoid eye contact.

Skin Protection: Wear appropriate work clothing. Wear protective shoes. Recommended material: protective skin cream.

Environmental Exposure Control: No specific controls are needed.

Hand Protection: Wear impervious gloves such as vinyl to minimize contact with skin.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Safety Data Sheet

Material Name: Cold Applied Adhesive

Product #: 307780

Appearance	Paste, mild mint scent	Physical State	Water Solubility: Insoluble
Odor Threshold	N/A	pH	N/A
Melting Point	N/A	Flash Point	N/A
Freezing point	N/A	Flash Point Method	Based on FP of the most volatile component
Autoignition	N/A	Vapor Pressure	<1
Lower Explosive Limit	N/A	Specific Gravity (water=1)	1.36
Upper Explosive Limit	N/A	% Volatile	2.30%
Vapor Density (air=1)	>1	VOC	31.17 g/l
		Density	11.31 lbs./gal. (calculated)

Other Information

No additional information available.

Section 10 - STABILITY AND REACTIVITY

Chemical Stability

Considered Stable

Conditions to Avoid

None Known

Incompatible Materials

None Known

Hazardous decomposition products

Thermal decomposition may produce toxic fumes of CO and/or CO₂

Section 11 - TOXICOLOGICAL INFORMATION



Safety Data Sheet

Material Name: Cold Applied Adhesive

Product #: 307780

Amino Silane (Refer to sections 2 and 3)

Oral: LD50 > 2,000 mg/kg. Remark: Very low order of toxicity.

Skin Absorption: LD50 > 2,000 mg/kg. Remark: Very low order of toxicity.

Inhalation: LC50 Not acutely Toxic.

Skin Direct Contact: Slight irritation

Eye Direct Contact: Severe irritation. Remark: Causes corneal injury.

Exposure Limits: Not applicable

Sensitization: No

Reproductive Toxicity: No

Mutagenicity: No

Teratogenicity: No

Synergistic Products: None

Section 12 - ECOLOGICAL INFORMATION

No known applicable information.

Section 13 - DISPOSAL CONSIDERATIONS

If this product as supplied becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. This product becomes a firm synthetic rubber when cured. Please allow to cure before disposal.

Section 14 - TRANSPORT INFORMATION

Special shipping information: None

DOT: Not regulated

TDG: Not available

PIN: Not available

Section 15 - REGULATORY INFORMATION

Rotterdam Convention (PIC) Annex III: listed (Tributyl tin compounds (impurities) <2ppm)

U.S. Regulatory information



Safety Data Sheet

Material Name: Cold Applied Adhesive

Product #: 307780

OSHA 29 CFR 1910-1200 – Irritant.

TSCA – All components of this product are listed on TSCA Inventory.

CERCLA Reportable Quantity – Not applicable.

SARA Title III:

Section 302 Extremely Hazardous Substances – None.

Section 304 – Not applicable.

Section 311/312 – Immediate (acute) health hazard.

Section 313 – None.

RCRA – Refer to section 13.

California Proposition 65 Carcinogens: This product does not contain any chemicals known by the State of California to cause cancer.

California Proposition 65 Reproductive Toxins: This product does not contain any chemicals known by the State of California to cause reproductive harm.

Canadian WHMIS Classification- D2B

Section 16 - OTHER INFORMATION

HMIG Rating

Health: 1 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

Summary of Changes

Revision Date: June 1, 2018

Revision Note: General Update

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National



Safety Data Sheet

Material Name: Cold Applied Adhesive

Product #: 307780

Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Material Safety Data Sheet

Carlisle SPF-245 Insulation Part A

MSDS No. 301178

Date of Preparation: 01/30/09

Revision: 003

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Carlisle SPF-245 Part A

Chemical Name: Polymeric Diphenylmethane Diisocyanate

Chemical Formula: Mixture

General Use: Spray Insulation

Manufacturer: Carlisle SynTec Incorporated, 1285 Ritner Highway, Carlisle, PA 17013, Phone: 800-4SYNTEC

Emergency Phone Number: CHEMTREC (USA) 800-424-9300

Section 2 - Hazards Identification

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Warning- Causes skin irritation
Warning- Causes serious eye irritation
Warning- May cause allergy or asthma symptoms or breathing difficulties if inhaled
Warning- May cause an allergic skin reaction
Warning- Suspected of causing genetic defects
Warning- May cause respiratory irritation
Warning- May cause damage to (tissue injury in the) upper respiratory tract and lungs through prolonged and repeated inhalation

HMIS

H 2*

F 1

R 1

PPE[†]

*Chronic Health Hazard

[†]Sec. 8

Potential Health Effects

Primary Entry Routes: Inhalation, skin contact, eye contact, ingestion.

Target Organs: Respiratory tract, skin, eyes.

Acute Effects

Inhalation: MDI vapors or mist at concentrations above the TLV can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). Persons with a pre-existing, non-specific bronchial hyperactivity can respond to concentrations below the TLV with similar symptoms as well as asthma attack or asthma-like symptoms. Acute or chronic overexposure to isocyanates may cause sensitization in some individuals, resulting in allergic respiratory reactions including wheezing, shortness of breath and difficulty breathing. Airborne overexposure, well above the TLV, may lead to eye irritation, headache, chemical bronchitis, asthma-like findings, bronchial spasm and pulmonary edema (fluid in lungs). These effects are usually reversible. Chemical or hypersensitive pneumonitis, with flu-like symptoms (e.g., fever, chills) has also been reported. These symptoms can be delayed up to several hours after exposure.

Eye: Liquid, aerosols or vapors are irritating and can cause tearing, reddening and swelling. Eye contact with isocyanates may also result in conjunctival irritation and mild corneal opacity. If left untreated, corneal damage can occur and injury is slow to heal. However, damage is usually reversible. Vapor or aerosol may cause irritation with symptoms of burning and tearing.

Skin: Isocyanates react with skin protein and moisture and can cause irritation which may include the following symptoms: reddening, swelling, rash, scaling or blistering. Skin sensitization, irritation, and/or dermatitis (irritative or allergic) may develop after repeated and/or prolonged contact with human skin. Data derived from an animal model (guinea pig) demonstrate that dermal exposure to MDI can lead to respiratory sensitization. The data indicate that the greater the amount of MDI skin exposure, the greater risk of developing respiratory sensitization. Cured material is difficult to remove. Contact with MDI can cause discoloration.

Ingestion: Can result in irritation and corrosive action in the mouth, pharynx, stomach tissue and digestive tract,. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea. Acute oral LD50 in rat reported above 10,000 mg/kg.

Carcinogenicity: IARC, NTP, and OSHA do not list this product as a carcinogen.

Medical Conditions Aggravated by Long-Term Exposure: Individuals, who are sensitized to Isocyanates and those with preexisting lung diseases or conditions, including non-specific bronchial hyper reactivity or asthma, must avoid all exposure to isocyanates. Skin allergies and Eczema.

Chronic Effects:

Inhalation: As a result of previous repeated overexposure or a single large dose, certain individuals develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the TLV. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath or asthma attack, could be immediate or delayed (up to several hours after exposure). Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Overexposure to isocyanates has also been reported to cause lung damage (including decrease in lung function) which may be permanent. Sensitization can either be temporary or permanent.

Skin: Prolonged contact can cause reddening, swelling, rash, scaling, blistering and in some cases, skin sensitization. Individuals who have skin sensitization can develop these symptoms from contact with liquid or vapors. Animal tests have indicated that respiratory sensitization can result from skin contact with MDI. This data reinforces the need to prevent direct skin contact with MDI.

Eye: Prolonged vapor contact may cause conjunctivitis.

Section 3 - Composition / Information on Ingredients

Ingredient Name	CAS Number	% wt or % vol
4,4' Diphenylmethane Diisocyanate (MDI)	101-68-8	30-60
Polymeric Diphenylmethane Diisocyanate (polymeric MDI)	9016-87-9	40-70
Other MDI Isomers and Oligomers	26447-40-5	5-10

Hazardous Ingredients:

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH IDLH
	TWA	CEIL	TWA	STEL	TWA	STEL	
4,4' Diphenylmethane Diisocyanate (MDI)	0.005 ppm	0.02 ppm	0.005 ppm (8 hr., 40 hr/wk)	None estab.	0.005 ppm (10 hr, 40 hr/wk)	0.02 ppm (15 min)	75 mg/m ³

Section 4 - First Aid Measures

Inhalation: Remove victim to fresh air and provide oxygen if breathing is difficult. Asthmatic symptoms may develop and may be immediate or delayed up to several hours. Extreme asthmatic reactions can be life threatening. Get medical attention.

Eye Contact: Immediately flush eyes with water for at least 15 minutes. Use lukewarm water if possible. Use fingers to ensure that eyelids are separated and that the eye is being irrigated. Get medical attention.

Skin Contact: Immediately remove contaminated clothing and shoes and wash skin with soap and water or corn oil. Wash contaminated clothing before reuse. If redness, itching, or a burning sensation develops, have skin examined and treated by medical personnel.

Ingestion: If swallowed, consult a physician immediately. Do not induce vomiting. Wash out mouth with water. If swallowed dilute with water. Do not give anything by mouth to an unconscious person.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Note to Physicians:

Eyes: Stain for evidence of corneal injury. If cornea is burned, instill antibiotic/steroid preparation as needed. Workplace vapors could produce reversible corneal epithelial edema impairing vision.

Skin: This compound is a skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burn.

Ingestion: Treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of the compound.

Inhalation: Treatment is essentially symptomatic. An individual having a dermal or pulmonary sensitization reaction to this material should be removed from further exposure to any diisocyanate.

Special Precautions/Procedures: Whenever possible, remove the worker from the source of contamination.

Section 5 - Fire-Fighting Measures

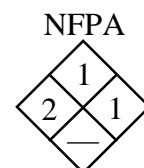
Flash Point: 198.9°C, Pensky-Martens closed cup
218°C (425°F), Open Cup

Burning Rate: Not Established

Autoignition Temperature: 240°C (464°F)

LEL: Not available.

UEL: Not available.



Flammability Classification: Class III B Combustible Liquid.

Extinguishing Media: Dry chemical, carbon dioxide, high expansion chemical foam, or water spray for large fires. If water is used, use very large quantities, as the reaction between water and hot isocyanate may be vigorous.

Unusual Fire or Explosion Hazards: At temperatures greater than 204° C (399°F), polymeric MDI can polymerize and decompose which can cause pressure build-up in closed containers. Explosive rupture is possible. Therefore, use cold water from a safe distance to cool fire-exposed containers. Water contamination of liquid will produce carbon dioxide. Do not reseal open containers if they are contaminated with water, since pressure build-up may rupture the container.

Hazardous Combustion Products: Carbon monoxide, carbon dioxide oxides of nitrogen, traces of HCN, MDI vapors or aerosols.

Fire-Fighting Instructions: Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by firefighters. During a fire, MDI vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. Do not release runoff from fire control methods into sewers or waterways. Avoid contact with the product and decontaminate equipment and protective clothing prior to reuse.

Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full-face piece operated in pressure-demand or positive-pressure mode. NFPA compliant helmet, hood, boots and gloves should also be worn.

Section 6 - Accidental Release Measures

Spill /Leak Procedures: Evacuate and ventilate spill area. Remove ignition sources. Control the source of the leak. Dike spill to prevent entry into water system or soil. Wear full protective equipment including respiratory equipment during clean-up.

Small Spills: Absorb isocyanates with sawdust or other absorbent, shovel into suitable unsealed containers, transport to well-ventilated area (outside) and treat with neutralizing solution. Add about 10 parts of neutralizer per part of isocyanate, with mixing. Allow container to stand uncovered for 48 hours to let CO₂ escape. Cleanup spill area by scrubbing with decontaminate solution and letting it stand for 15 minutes. Clean up with suitable absorbent and place in uncovered container for 48 hours to let CO₂ escape.

Large Spills: If temporary control of isocyanate vapor is required, a blanket of protein foam or other suitable foam (available at most fire departments) may be placed over the spill. Large quantities may be pumped into closed, but not sealed, container for disposal.

Containment: For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways.

Cleanup: Decontaminate floor with decontamination solution letting stand for at least 15 minutes.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Additional Spill Procedures and Neutralization:

Neutralization Solutions:

- (1) A mixture of 75% water, 20% non-ionic surfactant (e.g. Poly-Tergent SL-62, Tergitol TMN-10) and 5% n-propanol.
- (2) A mixture of 80% water, 20% non-ionic surfactant (e.g. Poly-Tergent SL-62, Tergitol TMN-10).
- (3) A mixture of 90% water, 8% ammonium hydroxide or concentrated ammonia, and 2% liquid detergent.
- (4) A mixture of 90% water, 8% sodium carbonate and 2% liquid detergent.

Section 7 - Handling and Storage

Handling Precautions: Do not breathe vapors, mists or dusts. Use adequate ventilation to keep airborne isocyanate levels below the exposure limits. Wear respiratory protection if material is heated, sprayed, used in a confined space or if the exposure limit may be exceeded. Warning properties (irritation of the eyes, nose and throat or odor) are not adequate to prevent overexposure from inhalation. This material can produce asthmatic sensitization upon either single inhalation exposure to a relatively high concentration or upon repeated inhalation exposure to lower concentrations. Individuals with lung or breathing problems or prior allergic reactions to isocyanates must not be exposed to vapor or spray mist. Avoid contact with skin and eyes. Wear appropriate eye and skin protection. Wash thoroughly after handling. Do not breath smoke or gases created by overheating or burning this material. Decomposition products can be highly toxic and irritating.

Storage Requirements: Store in dry, well-ventilated area between 60-90°F (15-32°C), in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected. Do not breathe aerosols or vapors. Do not allow material to freeze (storage below 0°F (-17°C) for 3 days). Low temperature exposure does increase liquid viscosity, requiring the material to be restored to room temperature prior to use.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls:

Ventilation: Local exhaust should be used to maintain levels below the TLV whenever MDI is processed, heat or spray applied. Standard reference sources regarding industrial ventilation (i.e., ACGIH Industrial Ventilation) should be consulted for guidance about adequate ventilation. Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Administrative Controls:

Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134). Concentrations greater than the TLV or PEL can occur when MDI is sprayed, heated or used in a poorly ventilated area. **In such cases or whenever concentrations of MDI exceed the TLV or are not known, respiratory protection MUST be worn. Use NIOSH or MSHA approved respirator for organic vapors with a pre-filter or a supplied airline respirator (SAR).** For emergency, non-routine operations (cleaning spills, reactor vessels, or storage tanks), where levels are unknown or where concentrations are Immediately Dangerous to Life or Health (IDLH) select and use an appropriate positive pressure air supplying respirator (airline or self-contained breathing apparatus (SCBA)). **Warning! Air purifying respirators do not protect workers in oxygen-deficient atmospheres.** When the atmospheric levels may exceed the occupational exposure limits (PEL or TLV) approved air-purifying respirators equipped with an organic vapor absorbent and particulate filter can be used as long as appropriate precautions and change out schedules are maintained. MDI has poor warning properties since the concentration at which MDI can be smelled is substantially higher than the maximum exposure limit. If respirators are used, OSHA requires a written respiratory protections program that includes at least: medical certification, training, fit testing, periodic environmental monitoring, maintenance, inspection, cleaning and convenient, sanitary storage areas.

Hazardous Ingredients:

4,4' – Diphenylmethane Diisocyanate	
ACGIH TLV	0.005 ppm (8 hr, 40 hr/week)
OSHA PEL CEILING	0.02 ppm
NIOSH TLV	0.005 ppm (10 hr, 40 hr/week)
NIOSH STEL	0.02 ppm (15 minute)

NOTE: The Occupational Exposure Limits listed for isocyanates do not apply to previously sensitized individuals.

Protective Clothing/Equipment:

Hand Protection: Permeation resistant gloves (that meet ANSI/ISEA 105-2005) required when handling the material directly or during its application. Butyl rubber, neoprene and PVC are also effective gloves.

Eye Protection: Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are NOT eye protective devices. Vapor resistant goggles should be worn when contact lenses are in use. In a splash hazard environment, chemical goggles should be used in combination with a full face-shield.

Skin and Body Protection: Industrial shoes to protect feet from contact with product. Long sleeves, long trousers to protect skin from contact with product. Protective skin creams or emollients useful.

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

Physical State: Liquid.

Appearance: Dark brown.

Odor: Slight musty odor or aromatic

Vapor Pressure: Less than 0.0001 mm Hg at 25 °C (77°F)

Vapor Density (Air=1): 8.5 for MDI

Density: 10.3 lbs/gallon

Specific Gravity (H₂O=1, at 4 °C): 1.24 @ 25°C (77°F)

Flash Point: 198.9°C, Pensky-Martens closed cup
218°C (425°F), Open Cup

Burning Rate: Not Established

Autoignition Temperature: 240°C (464°F)

LEL: Not available.

UEL: Not available.

Water Solubility: Not soluble-reacts slowly with water to liberate CO₂ gas.

Boiling Point (°C): 208°C(406°F) @ 5mm Hq for MDI

Freezing/Melting Point (°C): Below 0°C (32°F) for MDI

Viscosity: 200 cps @ 20°C (68°F)

% Volatile: Negligible.

pH: Not applicable.

Section 10 - Stability and Reactivity

Stability: Stable at room temperature in closed containers under normal storage and handling conditions.

Possibility of hazardous reactions: May occur. Contact with moisture, alkalines, tertiary amines, metal compounds or other products, which react with isocyanates, or temperatures above 160°C (320°F), may cause polymerization.

Chemical Incompatibilities: Water, amines, strong bases, alcohols. Will cause some corrosion to copper alloys and aluminum.

Conditions to Avoid: High temperatures above 160°C (320°F) and freezing.

Hazardous Decomposition Products: By high heat and fire: Carbon monoxide, carbon dioxide, oxides of nitrogen, dense black smoke, isocyanate, isocyanic acid, traces of HCN, MDI vapors or aerosols.

Section 11- Toxicological Information**Toxicity Data:**

Eye Effects: The aerosol, vapor or liquid will irritate human eyes following contact.

Skin Effects: Moderate irritant. Repeated and/or prolonged contact may cause skin sensitization. Animal studies have shown that respiratory sensitization can be induced by skin contact with known respiratory sensitizers including diisocyanates. These results emphasize the need for protective clothing including gloves to be worn at all times when handling these chemicals or in maintenance work.

Carcinogenicity: The ingredients of this product are not classified as carcinogenic by ACGIH or IARC, not regulated as carcinogens by OSHA, and not listed as carcinogens by NTP.

Mutagenicity: There is no substantial evidence of mutagenic potential.

Teratogenicity: There is no substantial evidence of teratogenic potential. Fetotoxicity seen only with maternal toxicity

Acute Inhalation Effects:

Rat, inhalation, TC_{Lo} : 490 mg/m³ per 4 hours (respirable aerosol)

Acute Oral Effects:

Rat, oral, LD50: >2000 mg/kg

Chronic Effects: A study where groups of rats were exposed for 6 hours/day, 5 days/week for a lifetime to atmospheres of respirable polymeric MDI aerosol. Overall, the tumor incidence, both benign and malignant, and the number of animals with tumors were not different from controls. Only at the top level (6 mg/m³), there was a significant incidence of a benign tumor of the lung (adenoma) and one malignant tumor (adenocarcinoma). There were no lung tumors at 1 mg/m³. The increased incidence of lung tumors is associated with prolonged respiratory irritation and concurrent accumulation of yellow material in the lung, which occurred throughout the study. In the absence of prolonged exposure to high concentrations leading to chronic irritation and lung damage, it is highly unlikely that tumor formation will occur.

Section 12 - Ecological Information**Ecotoxicity:****Acute and Prolonged Toxicity to Fish:**

LC0: > 1,000 mg/L (Zebra fish (*Brachydanio rerio*), 96 hrs)

LC0: > 3,000 mg/L (Killifish (*Oryzias latipes*), 96 hrs)

Acute Toxicity to Aquatic Invertebrates:

EC50: > 1,000 mg/L (Water flea (*Daphnia magna*), 24 hrs)

Toxicity to Aquatic Plants:

NOEC: 1,640 mg/L, End Point: growth (Green algae (*Scenedesmus subspicatus*), 72 hrs)

Toxicity to Microorganisms:

EC50: > 100 mg/L, (Activated sludge microorganisms, 3 hrs)

Environmental Fate:

Biodegradation: 0%, Exposure time: 28 Days. Material is expected to degrade only very slowly. Fails to pass OECD modified MITI test: hydrolysis products degrade slowly.

Bioaccumulation: Rainbow trout, Exposure time 112 days, < 1 BCF. Does not bioaccumulate.

Soil Absorption/Mobility: Movement in the environment is expected to be limited by the formation of insoluble polymers.

Section 13 - Disposal Considerations**Disposal:**

Disposal Regulatory Requirements: Waste must be disposed of in accordance with Federal, State, Provincial and local environmental control regulations. Incineration is the preferred method. Empty containers must be handled with care due to product residue.

Container Cleaning and Disposal: Decontaminate containers prior to disposal. Empty decontaminated containers should be crushed to prevent reuse. Do not heat or cut empty containers with electric or gas torch. Gases may be highly toxic.

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101):

Shipping Name: Other regulated substance, liquid, n.o.s. (contains 4,4' Diphenylmethane Diisocyanate (MDI)) Shipping Symbols: D G Hazard Class: 9 ID No.: NA3082 Packing Group: III Label: Class 9 Special Provisions (172.102): IB3, T2, TP1	Packaging Authorizations a) Exceptions: 173.155 b) Non-bulk Packaging: 173.203 c) Bulk Packaging: 173.241 DOT Product Reportable Quantity: 5000 lbs (2270 kgs) *When in individual containers of less than the product RQ, this material ships as non-regulated	Quantity Limitations a) Passenger, Aircraft, or Railcar: No Limit b) Cargo Aircraft Only: No Limit Vessel Stowage Requirements a) Vessel Stowage: A b) Other:
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Section 15 - Regulatory Information

EPA Regulations:

RCRA Hazardous Waste Number: Not listed (40 CFR 261.33)

RCRA Hazardous Waste Classification (40 CFR 261.11): MDI is not listed as a hazardous waste. However, under RCRA, it is the responsibility of the user of products to determine, at any time of disposal, whether a product meets any of the criteria for hazardous waste.

CERCLA Hazardous Substance (40 CFR 302.4) listed specific per RCRA, Sec. 3001; CWA, Sec. 311 (b)(4); CWA, Sec. 307(a), CAA, Sec. 112

CERCLA Reportable Quantity (RQ),

4,4' Diphenylmethane diisocyanate = 5,000 lbs

SARA 311/312 Codes:

Immediate Health Hazard, Delayed Health Hazard, Reactive Hazard, Acute Health Hazard, Chronic Health Hazard

SARA 313 Toxic Chemical (40 CFR 372.65):

Polymethylene polyphenyl isocyanate CAS Number: 9016-87-9 100%

Methylenebis (phenylisocyanate) (MDI) CAS Number: 101-68-8 ca 50%

SARA 302 EHS (Extremely Hazardous Substance) (40 CFR 355):

Not listed, Threshold Planning Quantity (TPQ)

TSCA Status

On the TSCA inventory

OSHA Regulations:

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed

OSHA This product is hazardous under the criteria of the Federal OSHA Communication Standard (29CFR 1910.1200)

State Regulations:

California Proposition 65:

This product contains the following chemical(s) known to the state of California to cause cancer, birth defects or other reproductive harm: None

Delaware Air Quality Management List

<u>Chemical Name</u>	<u>CAS Number</u>	<u>DRQ</u>
Methylenebis(phenylisocyanate)	101-68-8	5000

Note: Must be reported to the DRQ

Polymeric diphenylmethane diisocyanate	9016-87-9	100
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Note: Does not agree with the federal reportable quantity requirements to report

Massachusetts Hazardous Substance List

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Code</u>
Methylene bisphenyl isocyanate	101-68-8	2, 4, F8, F9

Minnesota Hazardous Substance List

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Codes</u>	<u>Hazards</u>	<u>Carcinogen</u>
Diphenylmethane diisocyanate	101-68-8	ANO	--	False
Methylene bisphenyl isocyanate	101-68-8	ANO	--	False

New York List of Hazardous Substances

<u>Chemical Name</u>	<u>CAS Number</u>	<u>RQ Air</u>	<u>RQ Land</u>	<u>Note</u>
Methylene bisphenyl isocyanate	101-68-8	1	1	--

Pennsylvania Hazardous Substances List

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Code</u>
1,1'-methylenebis[4-isocyanato] benzene	101-68-8	Environmental Hazard

Washington Permissible Exposure Limits for Air Contaminants

Methylene bisphenyl isocyanate		
Ceiling	0.02 ppm	0.2 mg/m ³

Section 16 - Other Information

Prepared By: Research & Development

Revision Notes: General revision- Formatting changes

Additional Hazard Rating Systems:

Disclaimer: The information contained in this document is based upon data that was supplied to Carlisle by other companies and organizations. No warranty of merchantability or fitness for a particular purpose is expressed or implied regarding the accuracy or completeness of the data and/or information in this material safety data sheet.

Material Safety Data Sheet

Carlisle SPF-245 Insulation SAZ, S, W or M Part B

MSDS No. 301179

Date of Preparation: 1/30/09

Revision: 001

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Carlisle SPF-245 Insulation Part B

Chemical Formula: Mixture

General Use: Insulation

Manufacturer: Carlisle SynTec Incorporated, 1285 Ritner Highway, Carlisle, PA 17013, Phone: 800-479-6832

Emergency Phone Number: CHEMTREC (USA) 800-424-9300

Section 2 - Hazards Identification

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Danger- Causes severe skin burns and eye damage

Danger- Causes serious eye damage

Warning- May cause an allergic skin reaction

Warning- May cause respiratory irritation

Warning- May cause damage to (tissue injury in the) upper respiratory tract and lungs through prolonged and repeated inhalation

HMIS

H 1
F 1
R 1

PPE[†]
[†]Sec. 8

Potential Health Effects

Primary Entry Routes: Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact.

Target Organs: Eye, skin, respiratory tract.

Acute Effects

Inhalation: Acute inhalation exposure of dimethylaminoethanol at high concentrations has been known to produce respiratory difficulties, loss of coordination and decreased motor activity in rats. At levels above the recommended exposure limit, the fluorocarbon acts as a weak narcotic. Acute overexposure causes tremors, confusion, irritation, suffocation, and may result in cardiac sensitization.

Eye: Dimethylaminoethanol is extremely irritating to the eyes. Direct contact with the liquid is corrosive. Polyol contact may result in irritation.

Skin: Dimethylaminoethanol is extremely irritating to the eyes. Direct contact with the liquid is corrosive. Burns and permanent injury may result. Polyol contact may result in irritation.

Ingestion: May cause gastrointestinal disturbances. Ingestion of large amounts of glycerine may result in nausea, vomiting, gastric irritation and kidney disorders. Glycerine can exert systematic effects when given orally in very large doses.

Carcinogenicity: IARC, NTP, and OSHA do not list the product as a carcinogen.

Medical Conditions Aggravated by Long-Term Exposure:

Chronic Effects: Repeated skin contact with dimethylaminoethanol may result in skin sensitization. Repeated inhalation has been known to produce effects on the eyes and nasal mucosa as well as respiratory and olfactory lesions in experimental animals. Exposure to dimethylaminoethanol has been associated with visual and ocular changes and is reversible upon significantly reduced or ceased exposure.

Section 3 - Composition / Information on Ingredients

Ingredient Name	CAS Number	% wt or % vol
Polyol		40-70
Flame Retardant		7-13
Glycerine	56-81-5	0.5-1.5
2-Dimethylaminoethanol	108-01-0	1-5
Surfactant		0.5-1.5
Catalyst		0.5-1.5
1,1,1,3,3-pentafluoropropane	460-73-1	5-10

Trace Impurities: Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH IDLH
	TWA	STEL	TWA	STEL	TWA	STEL	
Glycerol	15 mg/m ³ total dust 5 mg/m ³ respirable fraction	none estab.	10 mg/m ³ mist	20 mg/m ³	none estab.	none estab.	none estab.
2-Dimethylaminoethanol	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.
1,1,1,3,3-pentafluoropropane	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.

Section 4 - First Aid Measures

Inhalation: Remove the affected individual into fresh air and keep the person calm. Administer oxygen or artificial respiration as needed. Immediate medical attention required.

Eye Contact: Immediately flush eyes with water for at least 15 minutes. Use lukewarm water if possible. Use fingers to ensure that eyelids are separated and that the eye is being irrigated. Get medical attention.

Skin Contact: Immediately remove contaminated clothing and shoes and wash skin with soap and water. Wash contaminated clothing before reuse. If irritation persists seek medical attention immediately.

Ingestion: Rinse mouth and then drink plenty of water. Induce vomiting. Never induce vomiting or give anything by mouth if victim is unconscious or having convulsions. Immediate medical attention required.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Section 5 - Fire-Fighting Measures

Flash Point: 400°F (204°C)

Flash Point Method: Open Cup

Autoignition Temperature: No data available

Flammability Classification: Class III B Combustible Liquid.

Extinguishing Media: Water, dry extinguishing media, carbon dioxide, foam.

Unusual Fire or Explosion Hazards: None known.

Hazardous Combustion Products: Carbon monoxide, carbon dioxide.

Fire-Fighting Instructions: Do not release runoff from fire control methods to sewers or waterways.

Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face-piece operated in pressure-demand or positive-pressure mode.

Section 6 - Accidental Release Measures

Spill /Leak Procedures: Remove ignition sources. Control the source of the leak. Dike spill to prevent entry into water system or soil.

Small Spills: Absorb material with sawdust or other absorbent, shovel into suitable container for disposal.

Large Spills

Containment: For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways.

Cleanup: Large quantities may be pumped into container suitable for disposal. Residue should be absorbed with sawdust or other absorbent, shoveled into suitable container for disposal.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Avoid contact with skin and eyes. Wear appropriate eye and skin protection. Wash thoroughly after handling.

Storage Requirements: Store in dry, well-ventilated area between 70-80°F (21-27°C), in tightly closed containers. Protect against moisture. Store in unopened original containers in a cool, dry place. Low temperature exposure does increase liquid viscosity, requiring the material to be restored to room temperature prior to use. Indirect heat (do not use flames or direct contact with a heat source) can be used to warm the drums. Protect from direct sunlight. Keep in a cool, well-ventilated place. Avoid extreme heat. Store protected against freezing. Must not be repackaged by the customer.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls:

Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs.

Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Administrative Controls:

Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. **Use NIOSH or MSHA approved respirator for organic vapors with a pre-filter or a supplied airline respirator (SAR).** *Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.* If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

Protective Clothing/Equipment:

Hand Protection: Permeation resistant gloves (that meet ANSI/ISEA 105-2005) required when handling the material directly or during its application. Butyl rubber, neoprene and PVC are also effective gloves.

Eye Protection: Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are NOT eye protective devices. Vapor resistant goggles should be worn when contact lenses are in use. In a splash hazard environment, chemical goggles should be used in combination with a full face-shield.

Skin and Body Protection: Industrial shoes to protect feet from contact with product. Long sleeves, long trousers to protect skin from contact with product. Protective skin creams or emollients useful.

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance and Odor: Dark brown and musty

Density: 10.2 lbs/gallon

Flash Point: 400°F (204°C)

Flash Point Method: Open Cup

Autoignition Temperature: No data available

Water Solubility: slightly soluble

Viscosity: 1250 cps

Specific Gravity (H₂O=1, at 4 °C/39°F): 1.22

Section 10 - Stability and Reactivity

Stability: This product is stable at room temperature in closed containers under normal storage and handling conditions.

Possibility of hazardous reaction: Hazardous polymerization can occur in the presence of isocyanates.

Chemical Incompatibilities: Avoid contact with isocyanates. Product will foam in highly exothermic reaction.

Conditions to Avoid: Exposure to temperatures in excess of 80°F (27°C). Avoid moisture, direct sunlight and excessive temperatures.

Hazardous Decomposition Products: Thermal oxidative decomposition of material can produce carbon monoxide and carbon dioxide.

Section 11- Toxicological Information

Toxicity Data: No Information Available

Eye Effects: Minor irritation and reddening

Acute Inhalation Effects: Minor Irritation

Acute Oral Effects: Not Established

Skin Effects: Irritation

Chronic Effects: Not Established

Carcinogenicity: Not Established

Section 12 - Ecological Information

Ecotoxicity: Not Determined

Environmental Fate: Not Determined

Environmental Degradation: Not Determined

Soil Absorption/Mobility: Not Determined

Section 13 - Disposal Considerations

Disposal:

Disposal Regulatory Requirements: Waste must be disposed of in accordance with Federal, State, Provincial and local environmental control regulations. Incineration is the preferred method. Empty containers must be handled with care due to product residue. Do not discharge substance/product into sewer system.

Container Cleaning and Disposal: Decontaminate containers prior to disposal. Empty decontaminated containers should be crushed to prevent reuse. Do not heat or cut empty containers with electric or gas torch. Gases may be highly toxic.

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101):

Shipping Name: Not Regulated Shipping Symbols: N/A Hazard Class: N/A ID No.: N/A Packing Group: N/A Label: N/A Special Provisions (172.102): N/A	Packaging Authorizations a) Exceptions: N/A b) Non-bulk Packaging: N/A c) Bulk Packaging: N/A	Quantity Limitations a) Passenger, Aircraft, or Railcar: N/A b) Cargo Aircraft Only: N/A Vessel Stowage Requirements a) Vessel Stowage: N/A b) Other: N/A
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Section 15 - Regulatory Information

EPA Regulations:

TSCA: The components of this product are reported in the EPA, TSCA Inventory List.

Glycerine	CAS #: 56-81-5	
2-Dimethylaminoethanol	CAS #: 108-01-0	
1,1,1,3,3 Pentafluoropropane	CAS #: 460-73-1	TSCA Flag: P

RCRA Hazardous Waste Number: Not listed (40 CFR 261.33)

CERCLA Hazardous Substance (40 CFR 302.4) unlisted specific per RCRA, Sec. 3001; CWA, Sec. 311 (b)(4); CWA, Sec. 307(a), CAA, Sec. 112

CERCLA Reportable Quantity (RQ), N/A

SARA 311/312 Codes: Not Listed

SARA Toxic Chemical (40 CFR 372.65): Not listed

SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed, Threshold Planning Quantity (TPQ)

OSHA Regulations:

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed

State Regulations:

California Proposition 65:

This product contains chemical(s) known to the state of California to cause cancer, birth defects or other reproductive harm.

Massachusetts Hazardous Substance List

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Code</u>
Glycerine mist	56-81-5	2, 4
2-(Dimethylamino)ethanol	108-01-0	6

Minnesota Hazardous Substance List

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Codes</u>	<u>Hazards</u>	<u>Carcinogen</u>
Glycerin mist	56-81-5	A	--	False

Pennsylvania Hazardous Substances List

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Code</u>
1,2,3-Propanetriol	56-81-5	Basic Hazard
2-(Dimethylamino)ethanol	108-01-0	Basic Hazard

Washington Permissible Exposure Limits for Air Contaminants

Glycerin mist, total dust	
TWA	10 mg/m ³
Glycerine mist, respirable fraction	
TWA	5 mg/m ³

Section 16 - Other Information

Prepared By: Research and Development

Revision Notes: General revision- Formatting changes

Additional Hazard Rating Systems:

Disclaimer: The information contained in this document is based upon data that was supplied to Carlisle by other companies and organizations. No warranty of merchantability or fitness for a particular purpose is expressed or implied regarding the accuracy or completeness of the data and/or information in this material safety data sheet.

Safety Data Sheet

Material Name: CAV-GRIP 3

Product #: 329902
331381 – Int. Cylinder
332659 – #85 Cylinder

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name: CAV-GRIP 3

Product Use: Adhesive

Manufacturer Information

Carlisle SynTec Systems
1285 Ritner Highway
Carlisle, PA 17013
USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Acute Toxicity - Inhalation: Category 5
Skin Irritation: Category 2
Eye Damage: Category 2A
Reproductive Toxicity: Category 2
STOT Repeated Exposure: Category 2
Aspiration: Category 1
Flammable Liquid: Category 2
Aquatic Hazard – Acute: Category 1
Aquatic Hazard – Long-term: Category 1
Extremely Flammable Aerosol: Category 1

GHS Label Elements

Symbol(s)



Signal Word

Danger

Hazard Statement(s)

May cause respiratory irritation.
Causes skin irritation.
Causes serious eye irritation.
Suspected of damaging fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure.
May be fatal if swallowed and enters airways.
Highly flammable liquid and vapor.
Very toxic to aquatic life.



Safety Data Sheet

Material Name: CAV-GRIP 3

Product #: 329902
331381 – Int. Cylinder
332659 – #85 Cylinder

Very toxic to aquatic life with long lasting effects.
Contains gas under pressure; may explode if heated.

Precautionary Statement(s)

Keep away from heat/sparks/open flames/hot surfaces – no smoking.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Avoid release to the environment.
Use personal protective equipment as required.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lens, if present and easy to do. Continue rinsing.

POTENTIAL HEALTH EFFECTS

Acute Effects

EYES: Contact with eyes may cause irritation. Direct contact with liquid or vapors may cause stinging, tearing, redness, swelling, and eye damage.

SKIN: May cause skin irritation and/or dermatitis. Prolonged or repeated contact or exposure to vapors may cause redness, burning, and drying and cracking of the skin.

INHALATION: Breathing high concentrations of vapors may cause irritation of the nose and throat or signs of nervous system depression (i.e. – headache, nausea, drowsiness, dizziness, vomiting, loss of coordination and fatigue).

INGESTION: Ingestion may cause irritation of the digestive tract, nausea, vomiting, and signs of nervous system depression.

Chronic Effects

Avoid repeated exposure. May cause blood damage. Repeated contact may cause allergic reactions in very susceptible persons.

Aggravated Medical Conditions

Pre-existing eye, skin, or respiratory disorders may be aggravated by exposure to this product.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
79-20-9	Methyl acetate	22 – 40
142-82-5	Heptane	12 – 25
68476-86-8	Liquefied petroleum gas	5 – 15
115-10-6	Dimethyl ether	5 – 15
124-38-9	Carbon dioxide	1 – 7
108-88-3	Toluene	1 – 7

Any remaining ingredients (to comprise 100% of the product) should be considered a proprietary blend of non-hazardous substances, or materials below threshold reporting limits.

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Section 4 - FIRST AID MEASURES

GENERAL ADVICE: Show this safety Data sheet to the doctor in attendance.

EYES: Flush with plenty of cool water for at least 15 minutes, holding eyelids apart for thorough irrigation. If irritation persists, get immediate medical attention.

SKIN: Wash affected area thoroughly with soap and water. Remove contaminated clothing and wash affected areas thoroughly with mild soap. If skin irritation persists, get immediate medical attention.

INGESTION: Do not induce vomiting – seek immediate medical attention. If vomiting occurs, keep head lower than hips to prevent aspiration.

INHALATION: Move to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen and get immediate medical attention.

NOTES TO PHYSICIAN: Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Carbon dioxide, dry chemicals, foam. Water may be helpful in keeping adjacent containers cool; avoid spreading the liquid with water used for cooling. Water-based sprinkler systems may help contain larger fires.

Specific Hazards arising from the Chemical

Closed containers may rupture if exposed to fire or extreme heat. May produce toxic fumes if burning.

Special protective Equipment: Wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions

Use personal protective equipment. Remove all sources of ignition.

Environmental Precautions

Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained.

Methods for Clean-up

Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

Other Information

None known.

Safety Data Sheet

Material Name: CAV-GRIP 3

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Section 7 - HANDLING AND STORAGE

Handling

Use only in area provided with appropriate exhaust ventilation. Do not breathe vapors or spray mist. Wear appropriate personal protective equipment. Take precautionary measures against static discharges. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from open flames, hot surfaces and sources of ignition.

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from extremes of heat or cold. Keep in properly labeled containers.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Hazardous Components	OSHA PEL	ACGIH TLV
Methyl acetate	200	200
Heptane	500	400
Liquefied petroleum gas	Not established	1000
Dimethyl ether	Not established	1000
Carbon dioxide	5000	5000
Toluene	200	20

Engineering Controls

Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/face protection

Safety goggles or glasses, or full face shield.

Skin Protection

Protective gloves and impervious clothing. Consult the glove/clothing manufacturer for proper selection of materials.

Respiratory Protection

In operations where exposure limits are exceeded, use a NIOSH-approved respirator that has been selected by a technically qualified person for the specific work conditions.

Hygiene Practices

Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling. When using, do not eat, drink or smoke.

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Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Green liquid	Physical State	liquid
Odor	Solvent odor	Color	Green
VOC (g/L)	194	VOC (g/L) less exempt & water	206
Non-volatile (wt%)	30.05	Specific Gravity (g/l)	0.825
Bulk Density (lb/gal)	6.87	Solubility in Water	Insoluble
pH	Not available	Viscosity	Not available
Evaporation rate	Faster than nBuAc	Vapor Pressure (mmHg)	Not available
Vapor Density	Heavier than air	Boiling Point	-24.0°F [-31.1°C]
Freezing/Melting Point	Not determined	Flammability (solids)	No data
Partition Coefficient (n-octonal/water)	No data	Auto-ignition Temp	No data
Decomposition Temp	No data	Explosive Properties	No data
Oxidizing Properties	No data	Flash Point	156.0°F [104.4°C]
Flammable Limits	Lower: 2.23 Upper: 11.90		

Section 10 - STABILITY AND REACTIVITY

Chemical Stability

Stable under normal conditions. Hazardous polymerization does not occur.

Conditions to Avoid

Keep away from open flames, hot surfaces, static electricity and sources of ignition. Avoid extremes of heat or cold.

Materials to Avoid

Incompatible with strong acids and bases, alkali metals, halogens, and strong oxidizing agents.

Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapors. Carbon monoxide, carbon dioxide, smoke, and other unidentified organic compounds may be formed during combustion.

Possibility of Hazardous Reactions

None under normal conditions of use.



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Section 11 - TOXICOLOGICAL INFORMATION

Reproductive Toxicity:	Category 2	Acute Toxicity:	Oral: No data; Skin: No data; Inhalation: Category 5
Mutagenicity:	No data	Irritation:	Skin: Category 2
STOT-single exposure:	No data	Corrosivity:	No data
STOT-repeated exposure:	Category 2	Sensitization:	Respiratory: No data; Skin: No data
Aspiration Hazard:	Category 1	Typical Routes of Entry:	Inhalation, skin absorption, eye contact

Chronic Toxicity / Carcinogenicity

No known classifications.

Section 12 - ECOLOGICAL INFORMATION

Aquatic Toxicity:	Acute and prolonged Toxicity to Fish:	No data
	Acute Toxicity to Aquatic Invertebrates:	No data
	Environmental Fate and Pathways:	No data
Persistence and Degradability:	No data	
Bioaccumulative Potential:	No data	
Mobility in Soil:	No data	
Other Adverse Effects:	No data	

Section 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Methods

Dispose of in accordance with all applicable local, state, and federal regulations. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit, and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

Shipping Name: CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S. (PROPANE, BUTANE)

Hazard Class: 2.1

UN/NA #: UN3501

ICAO / IATA: CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S. (PROPANE, BUTANE)

Hazard Class: 2.1

UN/NA #: UN3501

IMDG / IMO: CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S. (PROPANE, BUTANE)

Hazard Class: 2.1

UN/NA #: UN3501



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Section 15 - REGULATORY INFORMATION

US TSCA: Yes – All components are listed or exempt

OSHA Regulatory Status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

SARA 313

Section 313 OF Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). If listed below, this product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical Designation	Cas No.	Weight %
Toluene	108-88-3	1 – 7%

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPS) (see 40 CFR 61)

Chemical Designation	Cas No.	Weight %
Toluene	108-88-3	1 – 7%

State Regulations

California Proposition 65

This product contains the following substance(s) known to the state of California to cause cancer or reproductive harm:

Chemical Name	CAS Number
Toluene	108-88-3
Ethylbenzene	100-41-4

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 2 Fire: 3 Reactivity: 0 Personal Protection B

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

Summary of Changes

Revision Date: December 30, 2019

Revision Note: General Update

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic



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Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

CCW-702

Synonyms

Sovent-based contact adhesive

Chemical Family

Adhesive

Product Use

Adhesive

Restrictions on Use

For industrial use only

Manufacturer Information

Dyn Air Incorporated
205 Brunswick Blvd
Pointe Claire, QC HR1A5
Canada
(514)-693-7650

www.carlisleccw.com

MSDS Assistance – 972-442-6545

Technical Assistance – 888-229-2199

Customer Service – 888-229-0199

Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with Schedule 1 of Hazardous Products Regulations (HPR) (SOR/2015-17)

Flammable Liquids - Category 2

Skin Corrosion/Irritation - Category 2

Serious Eye Damage/Eye Irritation - Category 2A

Specific Target Organ Toxicity - Single Exposure - Category 3

Specific Target Organ Toxicity - Repeated Exposure - Category 1 (central nervous system,kidneys)

Specific Target Organ Toxicity - Repeated Exposure - Category 2 (blood)

GHS Label Elements

Symbol(s)

Safety Data Sheet

Material Name: CCW-702

Product #: 305363



Signal Word

Danger

Hazard Statement(s)

Highly flammable liquid and vapor

Causes skin irritation

Causes serious eye irritation

May cause respiratory irritation. May cause drowsiness or dizziness

Causes damage to organs through prolonged or repeated exposure

May cause damage to organs through prolonged or repeated exposure

Precautionary Statement(s)

Prevention

Keep container tightly closed

Keep away from heat/sparks/open flame/hot surfaces - No smoking

Ground/Bond container and receiving equipment

Use explosion-proof electrical/ventilating/lighting equipment

Take precautionary measures against static discharge

Use only non-sparking tools

Use only outdoors or in a well-ventilated area

Wear protective gloves/protective clothing/eye protection/face protection

Do not breathe dust/fume/gas/mist/vapours/spray

Wash thoroughly after handling

Do not eat, drink or smoke when using this product

Response

In case of fire: Use appropriate media to extinguish

IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing

Call a POISON CENTER or doctor if you feel unwell

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower

If skin irritation occurs: Get medical advice/attention

Take off contaminated clothing and wash before reuse

Specific treatment (see label)

Storage

Store in a well-ventilated place. Keep container tightly closed

Keep cool

Store locked up

Disposal

Safety Data Sheet

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Product #: 305363

Dispose of contents/container in accordance with local/regional/national/international regulations

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
108-88-3	Toluene	40-70
67-64-1	Acetone	10-15
Proprietary	Petroleum hydrocarbon resin	10-30

Section 4 - FIRST AID MEASURES

Inhalation

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

Skin

Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Eyes

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion

If swallowed, get medical attention.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Most Important Symptoms/Effects

Acute

Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness.

Delayed

Causes damage to central nervous system, kidney damage. May cause damage to the blood system.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Use carbon dioxide, regular dry chemical, regular foam or water. Water may be ineffective.

Safety Data Sheet

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Product #: 305363

Unsuitable Extinguishing Media

Do not use high-pressure water streams.

Special Hazards Arising from the Chemical

Highly flammable liquid and vapor.

Hazardous Combustion Products

Carbon monoxide, carbon dioxide, oxides of nitrogen

Advice for firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Fire Fighting Measures

Move container from fire area if it can be done without risk.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up

Remove all sources of ignition. Avoid breathing vapors. Wear self-contained breathing apparatus and protective clothing. Ventilate affected area. Use non-sparking tools and equipment. Collect with absorbent into suitable container. Prevent entry into sewers, drains, ditches, underground or confined spaces and waterways. Absorb with sand or other non-combustible material.

Environmental Precautions

Avoid release to the environment. Collect spillage.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Keep away from heat, sparks, open flame, and hot surfaces - No smoking. Use non-sparking tools. Use explosion-proof electrical/ventilating/lighting equipment. Ground/Bond container and receiving equipment. Avoid prolonged contact with skin. Avoid contact with eyes. Wash with plenty of soap and water. Wash contaminated clothing before reuse. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Wear protective gloves/eye protection/face protection. Do not breathe gas/fume/vapour/spray. Do not eat, drink, or smoke when using this product. KEEP OUT OF REACH OF CHILDREN.

Conditions for Safe Storage, Including any Incompatibilities

Store in a well-ventilated place. Keep container tightly closed

Keep cool

Store locked up

Keep away from heat, sparks and flame. Keep container tightly closed. Do not puncture or burn containers, even when empty. Empty containers may contain product residue.

Safety Data Sheet

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Product #: 305363

Incompatible Materials

strong oxidizing agents, acids, bases

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Toluene	108-88-3
Alberta	50 ppm TWA ; 188 mg/m3 TWA
	Substance may be readily absorbed through intact skin
British Colombia	20 ppm TWA
Manitoba	20 ppm TWA
	Skin - potential for cutaneous absorption
New Brunswick	50 ppm TWA ; 188 mg/m3 TWA
	Skin - potential for cutaneous absorption
Northwest Territories	50 ppm TWA
	60 ppm STEL
	Skin notation
Nova Scotia	20 ppm TWA
Nunavut	50 ppm TWA
	60 ppm STEL
	Skin notation
Ontario	20 ppm TWA
Prince Edward Island	20 ppm TWA
Quebec	50 ppm TWAEV ; 188 mg/m3 TWAEV
	Skin designation
Saskatchewan	50 ppm TWA
	60 ppm STEL

Safety Data Sheet

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	Potentially harmful after absorption through skin or mucous membranes
Yukon	100 ppm TWA ; 375 mg/m3 TWA
	150 ppm STEL ; 560 mg/m3 STEL
	Skin notation
ACGIH:	20 ppm TWA
Acetone	67-64-1
Alberta	500 ppm TWA ; 1200 mg/m3 TWA
	750 ppm STEL ; 1800 mg/m3 STEL
British Colombia	250 ppm TWA
	500 ppm STEL
Manitoba	250 ppm TWA
New Brunswick	500 ppm TWA ; 1188 mg/m3 TWA
	750 ppm STEL ; 1782 mg/m3 STEL
Northwest Territories	500 ppm TWA
	750 ppm STEL
Nova Scotia	250 ppm TWA
	500 ppm STEL
Nunavut	500 ppm TWA
	750 ppm STEL
Ontario	500 ppm TWA
	750 ppm STEL
Prince Edward Island	250 ppm TWA
	500 ppm STEL
Quebec	500 ppm TWAEV ; 1190 mg/m3 TWAEV
	1000 ppm STEV ; 2380 mg/m3 STEV
Saskatchewan	500 ppm TWA

Safety Data Sheet

Material Name: CCW-702

Product #: 305363

	750 ppm STEL
Yukon	1000 ppm TWA ; 2400 mg/m3 TWA
	1250 ppm STEL ; 3000 mg/m3 STEL
ACGIH:	250 ppm TWA
	500 ppm STEL

ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)

Toluene (108-88-3)

0.02 mg/l Medium: blood Time: prior to last shift of workweek Parameter: Toluene ;

0.03 mg/l Medium: urine Time: end of shift Parameter: Toluene ;

0.3 mg/g creatinine Medium: urine Time: end of shift Parameter: o-Cresol with hydrolysis (background)

Acetone (67-64-1)

25 mg/l Medium: urine Time: end of shift Parameter: Acetone (nonspecific)

Engineering Controls

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin Protection

Wear appropriate chemical resistant clothing, Industrial Boots.

Respiratory Protection

Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	thin dark blue liquid	Physical State	liquid
Odor	sweet,solvent	Color	dark blue
Odor Threshold	Not available	pH	Not available
Melting Point	-95 °C(-139°F)	Boiling Point	56 - 110 °C133-230°F)
Freezing point	Not available	Evaporation Rate	3.2

Safety Data Sheet

Material Name: CCW-702

Product #: 305363

Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	465 °C(869°F)	Flash Point	-18 °C(-0.4°F)
Lower Explosive Limit	1.3	Decomposition	Not available
Upper Explosive Limit	12.8	Vapor Pressure	54.6 mmHg
Vapor Density (air=1)	3	Specific Gravity (water=1)	Not available
Water Solubility	Negligible	Partition coefficient: n-octanol/water	Not available
Viscosity	350 cps	Solubility (Other)	Hydrocarbons
Density	0.9	VOC	450 g/L

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable under normal conditions of use.

Possibility of Hazardous Reactions

Will not polymerize.

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition.

Incompatible Materials

Strong oxidizing agents, acids, bases

Hazardous decomposition products

Carbon monoxide, carbon dioxide, acids, bases

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

May cause respiratory irritation. May cause drowsiness or dizziness.

Skin Contact

Causes skin irritation.

Eye Contact

Causes serious eye irritation.

Ingestion

No information on significant adverse effects.

Safety Data Sheet

Material Name: CCW-702

Product #: 305363

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Toluene (108-88-3)

Oral LD50 Rat >7000 mg/kg

Dermal LD50 12 - 14 g/kg

Inhalation LC50 Rat 30 - 35 mg/L

Acetone (67-64-1)

Oral LD50 Rat 5800 mg/kg

Dermal Guinea pig >7246 mg/kg

Inhalation LC50 Rat 32000 ppm 4 h

Product Toxicity Data

Acute Toxicity Estimate

Dermal	> 2000 mg/kg
Oral	> 2000 mg/kg

Immediate Effects

Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness.

Delayed Effects

Causes damage to central nervous system, kidney damage. May cause damage to the blood system.

Irritation/Corrosivity Data

Causes serious eye irritation, skin irritation, Irritation to respiratory tract.

Respiratory Sensitization

No information available for the product.

Dermal Sensitization

No information available for the product.

Component Carcinogenicity

Toluene	108-88-3
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))
Acetone	67-64-1
ACGIH:	A4 - Not Classifiable as a Human Carcinogen

Germ Cell Mutagenicity

No information available for the product.

Safety Data Sheet

Material Name: CCW-702

Product #: 305363

Reproductive Toxicity

No information available for the product.

Specific Target Organ Toxicity - Single Exposure

central nervous system, respiratory system

Specific Target Organ Toxicity - Repeated Exposure

Central nervous system, kidney, blood

Aspiration hazard

No information available for the product.

Medical Conditions Aggravated by Exposure

No data available.

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

Toluene	108-88-3
Fish:	LC50 96 h Pimephales promelas 15.22 - 19.05 mg/L [flow-through] (1 day old); LC50 96 h Pimephales promelas 12.6 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.89 - 7.81 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 14.1 - 17.16 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.8 mg/L [semi-static]; LC50 96 h Lepomis macrochirus 11 - 15 mg/L [static]; LC50 96 h Oryzias latipes 54 mg/L [static]; LC50 96 h Poecilia reticulata 28.2 mg/L [semi-static]; LC50 96 h Poecilia reticulata 50.87 - 70.34 mg/L [static]
Algae:	EC50 96 h Pseudokirchneriella subcapitata >433 mg/L IUCLID; EC50 72 h Pseudokirchneriella subcapitata 12.5 mg/L [static] EPA
Invertebrate:	EC50 48 h Daphnia magna 5.46 - 9.83 mg/L [static] EPA; EC50 48 h Daphnia magna 11.5 mg/L IUCLID
Acetone	67-64-1
Fish:	LC50 96 h Oncorhynchus mykiss 4.74 - 6.33 mL/L; LC50 96 h Pimephales promelas 6210 - 8120 mg/L [static]; LC50 96 h Lepomis macrochirus 8300 mg/L
Invertebrate:	EC50 48 h Daphnia magna 10294 - 17704 mg/L [static] EPA; EC50 48 h Daphnia magna 12600 - 12700 mg/L IUCLID

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents/container in accordance with local/regional/national/international regulations. Subject to disposal regulations. U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

Shipping Name: ADHESIVES

Hazard Class: 3

UN/NA #: UN1133

Packing Group: II

Required Label(s): 3

IATA Information:

Shipping Name: ADHESIVES

Hazard Class: 3

UN#: UN1133

Packing Group: II

Required Label(s): 3

IMDG Information:

Shipping Name: ADHESIVES

Hazard Class: 3

UN#: UN1133

Packing Group: II

Required Label(s): 3

TDG Information:

Shipping Name: ADHESIVES

Hazard Class: 3

UN#: UN1133

Packing Group: II

Required Label(s): 3

Component Marine Pollutants (IMDG)

Not a marine pollutant.

International Bulk Chemical Code

This material contains one or more of the following chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

Toluene	108-88-3
IBC Code:	Category Y

Safety Data Sheet

Material Name: CCW-702

Product #: 305363

Acetone	67-64-1
IBC Code:	Category Z

Section 15 - REGULATORY INFORMATION

Canada Regulations

CEPA - Priority Substances List

Toluene	108-88-3
	Priority Substance List 1 (substance not considered toxic)

Ozone Depleting Substances

None of this product's components are on the list.

Council of Ministers of the Environment - Soil Quality Guidelines

Toluene	108-88-3
Residential and Parkland	0.37 mg/kg coarse (surface (<=1.5 m), Free-phase formation, a circumstance deemed unacceptable by many jurisdictions, occurs when a substance exceeds its solubility limit in soil water. The concentration at which this occurs is dependent on soil texture, porosity, and aeration porosity. Under the assumptions used for this guideline, at concentrations greater than 660 mg/kg in coarse soil, or 680 mg/kg in fine soil, formation of free-phase Toluene will likely occur); 0.08 mg/kg fine (surface (<=1.5 m), Free-phase formation, a circumstance deemed unacceptable by many jurisdictions, occurs when a substance exceeds its solubility limit in soil water. The concentration at which this occurs is dependent on soil texture, porosity, and aeration porosity. Under the assumptions used for this guideline, at concentrations greater than 660 mg/kg in coarse soil, or 680 mg/kg in fine soil, formation of free-phase Toluene will likely occur); 0.37 mg/kg coarse (subsoil (>1.5 m), Free-phase formation, a circumstance deemed unacceptable by many jurisdictions, occurs when a substance exceeds its solubility limit in soil water. The concentration at which this occurs is dependent on soil texture, porosity, and aeration porosity. Under the assumptions used for this guideline, at concentrations greater than 660 mg/kg in coarse soil, or 680 mg/kg in fine soil, formation of free-phase Toluene will likely occur); 0.08 mg/kg fine (subsoil (>1.5 m), Free-phase formation, a circumstance deemed unacceptable by many jurisdictions, occurs when a substance exceeds its solubility limit in soil water. The concentration at which this occurs is dependent on soil texture, porosity, and aeration porosity. Under the assumptions used for this guideline, at concentrations greater than 660 mg/kg in coarse soil, or 680 mg/kg in fine soil, formation of free-phase Toluene will likely occur)

Council of Ministers of the Environment - Water Quality Guidelines

Safety Data Sheet

Material Name: CCW-702

Product #: 305363

Toluene	108-88-3
Marine Aquatic Life	215 µg/L

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Toluene	108-88-3
SARA 313:	1 % de minimis concentration
CERCLA:	1000 lb final RQ; 454 kg final RQ
TSCA 12b:	Section 4 , 1 % de minimus concentration (related to Hydrocarbons, C>4)
Acetone	67-64-1
CERCLA:	5000 lb final RQ; 2270 kg final RQ

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: Yes **Chronic Health:** Yes **Fire:** Yes **Pressure:** No **Reactivity:** No

Component Analysis - Inventory

Toluene (108-88-3)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Acetone (67-64-1)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 3 Fire: 2 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Safety Data Sheet

Material Name: CCW-702

Product #: 305363

Health: 2 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

New SDS: 5/29/2018

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used, CCWI Company must rely upon the hazard evaluation of such components submitted by that product's manufacturer or importer. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name: Clear Cut-Edge Sealant

Synonym: Industrial Sealant

Chemical Family: Solvent Based Sealant

Product Use: Sealant for TPO Single-Ply Roofing Membranes

Restrictions on Use: For industrial use only.

Manufacturer Information

Carlisle SynTec

1285 Ritner Highway

Carlisle, PA 17013

USA

Phone: +1-800-479-6832

Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Reproductive Toxicity- Category 2

Skin Irritation - Category 2

Aspiration Hazard - Category 1

Specific Target Organ Toxicity - Single Exposure - Category 3

Specific Target Organ Toxicity - Repeated Exposure - Category 2

Flammable Liquids- Category 2

GHS Label Elements**Symbol(s)****Signal Word**

Danger

Hazard Statement(s)

H225: Highly flammable liquid and vapour.

H304: May be fatal if swallowed and enters airways.

H315: Causes skin irritation.

H336: May cause drowsiness or dizziness.

H361: Suspected of damaging fertility or the unborn child.

H373: May cause damage to organs through prolonged or repeated exposure.

Safety Data Sheet

Material Name: Clear Cut-Edge Sealant

Product #: 303436

Precautionary Statement(s)

Prevention

- [201]: Obtain special instructions before use.
- P202: Do not handle until all safety precautions have been read and understood.
- P210: Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
- P233: Keep container tightly closed.
- P240: Ground/bond container and receiving equipment.
- P241: Use explosion-proof electrical/ventilating/lighting equipment.
- P242: Use only non-sparking tools.
- P243: Take precautionary measures against static discharge.
- P260: Do not breathe dust/fume/gas/mist/vapors/spray.
- P264: Wash hands, forearms, and other exposed areas thoroughly after handling.
- P271: Use only outdoors or in a well-ventilated area.
- P272: Contaminated work clothing should not be allowed out of the workplace.
- P273: Avoid release to the environment.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response

- P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P302+P352: IF ON SKIN: Wash with plenty of soap and water.
- P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308+P313: IF exposed or concerned: Get medical advice/attention.
- P312: Call a POISON CENTER or doctor/physician if you feel unwell.
- P314: Get medical advice/attention if you feel unwell.
- P331: Do NOT induce vomiting.
- P332+P313: If skin irritation occurs: Get medical advice/attention.
- P337+P313: If eye irritation persists: Get medical advice/attention.
- P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
- P362: Take off contaminated clothing and wash before reuse.
- P370+P378: In case of fire: Use appropriate media to extinguish.
- P391: Collect spillage.

Storage

- P403 + P235 Store in a well-ventilated place. Keep cool
- P403 + P233 Store in a well-ventilated place. Keep container tightly closed
- P405 Store locked up

Disposal

- P501 Dispose of contents/container in accordance with local/regional/national/international regulations

EMERGENCY OVERVIEW

IMMEDIATE CONCERNS: DANGER! Extremely flammable liquid and vapor. Vapor may cause flash fire and explosion. Harmful or fatal if swallowed. Harmful if absorbed through the skin. Pulmonary aspiration hazard. After ingestion, may enter lungs and produce damage. High vapor concentrations may cause drowsiness. Can cause eye, skin and respiratory tract irritation.

Safety Data Sheet

Material Name: Clear Cut-Edge Sealant

Product #: 303436

POTENTIAL HEALTH EFFECTS

EYES: Can cause severe eye irritation and corneal damage.

SKIN: Causes defatting and skin irritation. Can cause dermatitis.

SKIN ABSORPTION: May be absorbed through the skin in harmful amounts.

INGESTION: Can cause gastrointestinal irritation, nausea and vomiting. Aspiration of material into the lungs may cause chemical pneumonitis, which can be fatal. Harmful or fatal if swallowed.

INHALATION: May cause nose or throat irritation. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis and loss of consciousness).

ROUTES OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, and Skin Contact

TARGET ORGAN STATEMENT: Central Nervous System (CNS)

IRRITANCY: Eyes, nose, throat, respiratory tract, and skin irritation.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
108-88-3	Toluene	45 - 70
1330-20-7	Xylene(o-, m-, p-Isomers)	15-40

Section 4 - FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of tempered water (at least 15-20 minutes) lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN: Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash or dispose of clothing before reuse.

INGESTION: Do not induce vomiting, keep person warm, quiet and get medical attention immediately. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Aspiration of this material into the lungs due to vomiting can cause chemical pneumonitis which can be fatal.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Liquid and vapor can severely irritate the eyes depending on type of exposure (splash, vapor) and exposure time.

SKIN: Mild to moderate skin irritant.

SKIN ABSORPTION: May be absorbed through the skin and can contribute to overall exposure. Effects are similar to CNS depression.

Safety Data Sheet

Material Name: Clear Cut-Edge Sealant

Product #: 303436

INGESTION: May result in central nervous system (CNS) depression with symptoms such as headaches, nausea, vomiting, diarrhea, dizziness, incoordination and unconsciousness. Aspiration of material into lungs may cause chemical pneumonitis which can be fatal.

INHALATION: High vapor concentrations may cause CNS depression with symptoms including light headedness, giddiness, nausea, drowsiness, headache, nose, throat and respiratory tract irritation, reduced appetite, confusion, and unconsciousness.

ACUTE TOXICITY: High vapor concentrations may cause central nervous system (CNS) depression with symptoms including light headedness, giddiness, nausea, drowsiness, headache, nose, throat and respiratory tract irritation, reduced appetite, confusion and unconsciousness.

CHRONIC EFFECTS: Damage to the nervous system of the extremities, peripheral neuropathy, with symptoms including numbness, tingling and weakness in the toes and fingers, sensory impairment to touch, pain, vibration and temperature, muscular weakness, blurred vision, coldness of extremities, loss of body weight and reflexes, and even paralysis. Frequent or prolonged contact may irritate the skin and cause a skin rash (dermatitis).

Section 5 - FIRE FIGHTING MEASURES

FLAMMABLE CLASS: Class IB

GENERAL HAZARD: Flammable liquid and vapor.

Extinguishing Media

Dry chemical, foam, carbon dioxide, water spray or fog.

Explosion Hazards

Avoid fire, sparks, static electricity and hot surfaces. Liquid readily evaporates at room/ambient temperature. Vapors are invisible, flammable, heavier than air, and may accumulate in low areas and spread long distances. Distant ignition and flashback are possible.

Hazardous Combustion Products

Carbon Monoxide, Carbon Dioxide, Aldehydes

Fire Fighting Measures

As in any fire, wear self-contained breathing apparatus with pressure-demand, full face piece SCBA (MSHA/NIOSH approved or equivalent) and full protective gear.

Sensitive to Static Discharge: Likely to catch fire from near-by spark. Static charge may accumulate by flow or agitation. Grounding and bonding of containers is required.

Hazardous Decomposition Products: Carbon Monoxide and Carbon Dioxide may form when heated to decomposition.

Safety Data Sheet

Material Name: Clear Cut-Edge Sealant

Product #: 303436

Section 6 - ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Dike area to contain spill. Take precautions as necessary to prevent contamination of ground and surface waters. Recover spilled material on absorbent, such as sawdust or vermiculite, and sweep into closed containers for disposal. After all visible traces, including ignitable vapors, have been removed, thoroughly wet vacuum the area. Do not flush to sewer. If area of spill is porous, remove as much contaminated earth and gravel, etc. as necessary and place in closed containers for disposal. Only those persons who are adequately trained, authorized, and wearing the required personal protective equipment (PPE) should participate in spill response and clean-up.

LARGE SPILL: Keep spectators away. Only those persons who are adequately trained, authorized and wearing the required personal protective equipment (PPE) should participate in spill response and clean-up. Ventilate the area by natural means or by explosion proof mechanical means (i.e. fans). Know and prepare for spill response before using or handling this product. Eliminate all ignition sources (flames, hot surfaces, portable heaters and sources of electrical, static, or frictional sparks). Dike and contain spill with inert material (e.g. sand, earth). Transfer liquids to covered and labeled metal containers for recovery or disposal, or remove with inert absorbent. Use only non-sparking tools and appropriate PPE. Place absorbent diking materials in covered metal containers for disposal. Prevent contamination of sewers, streams, and groundwater with spilled material or used absorbent.

Section 7 - HANDLING AND STORAGE

GENERAL PROCEDURES: For professional or industrial use only. Follow label instructions. Keep out of the reach of children. Not for consumption. No smoking. Do not breathe vapors. Avoid contact with body. Turn off all pilot lights, flames, stoves, heaters, electric motors, welding equipment and other sources of ignition. Empty containers must not be washed and re-used for any purpose. Contact lens wearers must wear protective eye wear around chemical vapors and liquid. Wash hands thoroughly after handling. Flammable vapors may cause flash fire or ignite explosively. To prevent build-up of vapors, use adequate natural and/or mechanical ventilation (e.g. open all windows and doors to achieve cross ventilation). Containers may be hazardous when empty. Never use welding or cutting torch on or near container. Do not cut, drill, grind, or expose containers to heat, sparks, static electricity or other source of ignition. Explosion may occur causing injury or death.

HANDLING: Use adequate ventilation and appropriate respiratory protection to avoid breathing vapors when cover is removed. Ground and bond all equipment when handling flammable solvent-borne material.

Storage

Keep container closed when not in use. Store in a dry, well ventilated area, out of the sun and away from ignition sources. Do not remove or deface label. Prevent water or moist air from entering container.

STORAGE TEMPERATURE: 15.5°C (60°F) Minimum to 35°C (95°F) Maximum

Incompatible Materials

Strong oxidizing agents, acids, bases

Safety Data Sheet

Material Name: Clear Cut-Edge Sealant

Product #: 303436

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Toluene	108-88-3	
OSHA (US):	200 ppm TWA	300 ppm STEL Ceiling
ACGIH:	20 ppm TWA	
Xylene(o-, m-, p-Isomers)	1330-20-7	
OSHA (US):	100ppm TWA; 435 mg/m ³ TWA	
ACGIH	100 ppm TWA; 434 mg/m ³ TWA	150 ppm; 651 mg/m ³ STEL

Engineering Controls

Provide sufficient explosion proof mechanical (general and/or local exhaust) ventilation to maintain exposure below the occupational exposure limit and exposure concentration.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear safety glasses with side shields (or goggles) or a full face respirator.

Skin Protection

Wear chemical protective clothing & boots to prevent repeated or prolonged skin contact. Wear impervious gloves, if needed, to prevent repeated or prolonged skin contact.

Respiratory Protection

NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Glove Recommendations

Wear appropriate chemical resistant gloves such as nitrile rubber.

WORK HYGIENIC PRACTICES: Use good hygiene practices when handling this material. Wash hands thoroughly after use.

Safety Data Sheet

Material Name: Clear Cut-Edge Sealant

Product #: 303436

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	viscous liquid	Physical State	liquid
Odor	Solvent-like	Color	clear
Boiling Point Range	110.6°C(231°F) to 137°C(278.6°F)	Flammability Limit	1.0 to 7.1
Autoignition	526 °C (980 °F)	Flash Point	8.9°C (48 °F)
Specific Gravity (water=1)	0.872	% Volatile (by weight)	84.1
Vapor Density (air=1)	4	VOC	732.800 g/L EPA method 24
Density	7.27 lbs/gal		

COMMENTS: 5.27 lb VHAP/lb Solid 84.1% by weight HAP

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable under normal conditions of use.

Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Avoid fire, sparks, static electricity and hot surfaces.

Incompatible Materials

Strong oxidizing agents, strong acids and strong bases.

Hazardous decomposition products

Carbon monoxide and carbon dioxide may form when heated to decomposition.

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

May cause respiratory irritation.

Skin Contact

Causes skin irritation.

Safety Data Sheet

Material Name: Clear Cut-Edge Sealant

Product #: 303436

Irritation

Eyes, nose, throat, respiratory tract irritation.

Corrosivity

Not applicable

Sensitization:

Not applicable

Neurotoxicity:

Not applicable

Genetic Effects:

Not applicable

Mutagenicity:

Not applicable

Reproductive Effects:

This product contains toluene, a chemical known to the state of California to cause birth defects or other reproductive harm.

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Toluene (108-88-3)

Oral LD50 Rat 2600 mg/kg - 7500 mg/kg

Dermal LD50 Rabbit 12,124 mg/kg

Inhalation LD50 Rat 8000 ppm (4hr dose)

Xylene (1330-20-7)

Oral LD50 Rat 4300 mg/kg

Dermal LD50 Rabbit 2000 mg/kg

Inhalation LD50 Rat 26800 ppm

Component Carcinogenicity

Toluene	108-88-3
IARC:	3
Xylene(o-, m-, p-Isomers)	1330-20-7
IARC:	3

Section 12 - ECOLOGICAL INFORMATION

Environmental Data

This product contains components that will normally float on water. These components may be harmful to aquatic organisms and may cause long term adverse effects in the aquatic environment.

Ecotoxicological Information:

Safety Data Sheet

Material Name: Clear Cut-Edge Sealant

Product #: 303436

Contains components that are potentially toxic to freshwater and saltwater ecosystems.

Chemical Name	Wt.%	CAS
Toluene	45 - 70	108-88-3
Xylenes (o-,m-,p- Isomers)	15 - 40	1330-20-7

Bioaccumulation/Accumulation

Contains components with the potential to bio-accumulate.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

Shipping Name: ADHESIVES

Hazard Class: 3

UN/NA #: UN1133

Packing Group: II

NAERG: 128

Marine Pollutant #1: None

OTHER SHIPPING INFORMATION: contains (Toluene, Xylene)

SPECIAL SHIPPING NOTES: If individual container size is less than 1.3 gallons, the proper shipping name is:

ORM-D Consumer Commodity

Non-Regulated

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: Yes **Chronic Health:** Yes **Fire:** Yes **Pressure:** No **Reactivity:** No

Safety Data Sheet

Material Name: Clear Cut-Edge Sealant

Product #: 303436

EPCRA SECTION 313 SUPPLIER NOTIFICATION

Chemical Name	Wt.%	CAS
Toluene	45 - 70	108-88-3
Xylenes (o-,m-,p- Isomers)	15 - 40	1330-20-7

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

Chemical Name	Wt.%	CERCLA RQ
Toluene	45 - 70	
Xylenes (o-,m-,p- Isomers)	15 - 40	100

TSCA (TOXIC SUBSTANCE CONTROL ACT)

Chemical Name	CAS	TSCA SECTION
Toluene	108-88-3	1,000 lbs.
Xylenes (o-,m-,p- Isomers)	1330-20-7	8a, 8d, 12b,

CLEAN AIR ACT

Chemical Name	Wt.%	CAS
Toluene	45 - 70	108-88-3
Xylenes (o-,m-,p- Isomers)	15 - 40	1330-20-7

CALIFORNIA PROPOSITION 65: This product contains toluene, a chemical known to the state of California to cause birth defects or other reproductive harm.

Chemical Name	Wt.%	Listed
Toluene	45 – 70	Developmental Toxicity

STATES WITH SPECIAL REQUIREMENTS

Chemical Name	Requirements
Toluene	New Jersey Right to Know List Pennsylvania Right to Know List Massachusetts Toxic Use Reduction Act (TURA) Reportable Chemical
Xylenes (o-,m-,p-Isomers)	New Jersey Right to Know List Pennsylvania Right to Know List Massachusetts Toxic Use Reduction Act (TURA) Reportable Chemical Illinois Right to Know List Minnesota Right to Know List Rhode Island Right to Know List

Safety Data Sheet

Material Name: Clear Cut-Edge Sealant

Product #: 303436

Canadian WHMIS Ingredient Disclosure List (IDL)

CANADA

WHMIS HAZARD SYMBOL AND CLASSIFICATION



Flammable Liquid

Toxic

DOMESTIC SUBSTANCE (INVENTORY): Toluene and Xylene are specified on the Canadian Domestic Substance List (DSL).

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 2 Fire: 3 Reactivity: 0 Personal Protection B

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 2 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

Revision Date: January 24, 2019

Revision Note: General Update

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information



Safety Data Sheet

Material Name: Clear Cut-Edge Sealant

Product #: 303436

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name: FAST Bag in a Box Part A

Synonym: Polymethylene Polyphenylisocyanate

Chemical Family: Aromatic isocyanates

Product Use: Two-part adhesive for roofing systems

Restrictions on Use: For industrial use only.

Manufacturer Information

Carlisle SynTec

1285 Ritner Highway

Carlisle, PA 17013

USA

Phone: +1-800-479-6832

Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Acute Toxicity- Category 4 (Inhalation- mist)

Skin Corrosive/Irritation - Category 2

Eye Damage/Irritation - Category 2B

Specific Target Organ Toxicity - Single Exposure –(Irritating to respiratory system)-Category 3

Specific Target Organ Toxicity - Repeated Exposure –(by inhalation)-Category 2

Skin Sensitivity - Category 1B

Respiratory Sensitization- Category 1

Carcinogenicity-Category 2

GHS Label Elements

Symbol(s)



Signal Word

Danger

Hazard Statement:

H320 Causes eye irritation.

H315 Causes skin irritation.

H332 Harmful if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

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H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs (Olfactory organs) through prolonged or repeated exposure (inhalation).

Precautionary Statements (Prevention):

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P271 Use only outdoors or in a well-ventilated area.
P260 Do not breathe dust/gas/mist/vapours.
P201 Obtain special instructions before use.
P261 Avoid breathing mist.
P202 Do not handle until all safety precautions have been read and understood.
P284 [In case of inadequate ventilation] wear respiratory protection.
P272 Contaminated work clothing should not be allowed out of the workplace.
P264 Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308 + P311 IF exposed or concerned: Call a POISON CENTER or doctor/physician.
P314 Get medical advice/attention if you feel unwell.
P303 + P352 IF ON SKIN (or hair): Wash with plenty of soap and water.
P333 + P311 If skin irritation or rash occurs: Call a POISON CENTER or doctor/physician.
P362 + P364 Take off contaminated clothing and wash before reuse.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P337 + P311 If eye irritation persists: Call a POISON CENTER or doctor/physician.

Precautionary Statements (Storage):

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Precautionary Statements (Disposal):

P501 Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified

No specific dangers known, if the regulations/notes for storage and handling are considered.

Labeling of special preparations (GHS):

CONTAINS ISOCYANATES. INHALATION OF ISOCYANATE MISTS OR VAPORS MAY CAUSE RESPIRATORY IRRITATION, BREATHELESSNESS, CHEST DISCOMFORT AND REDUCED PULMONARY FUNCTION. OVEREXPOSURE WELL ABOVE THE PEL MAY RESULT IN BRONCHITIS, BRONCHIAL SPASMS AND PULMONARY EDEMA. LONG-TERM EXPOSURE TO ISOCYANATES HAS BEEN REPORTED TO CAUSE LUNG DAMAGE, INCLUDING REDUCED LUNG FUNCTION WHICH MAY BE PERMANENT. ACUTE OR CHRONIC OVEREXPOSURE TO ISOCYANATES MAY CAUSE SENSITIZATION IN SOME INDIVIDUALS, RESULTING IN ALLERGIC RESPIRATORY REACTIONS INCLUDING WHEEZING,

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SHORTNESS OF BREATH AND DIFFICULTY BREATHING. ANIMAL TESTS INDICATE THAT SKIN CONTACT MAY PLAY A ROLE IN CAUSING RESPIRATORY SENSITIZATION. ANIMAL TESTS AND OTHER RESEARCH INDICATE THAT SKIN CONTACT WITH MDI MAY PLAY A ROLE IN CAUSING RESPIRATORY SENSITIZATION.

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Emergency overview

DANGER:
 CONTAINS ISOCYANATES. INHALATION OF ISOCYANATE MISTS OR VAPORS MAY CAUSE RESPIRATORY IRRITATION, BREATHELESSNESS, CHEST DISCOMFORT AND REDUCED PULMONARY FUNCTION. OVEREXPOSURE WELL ABOVE THE PEL MAY RESULT IN BRONCHITIS, BRONCHIAL SPASMS AND PULMONARY EDEMA. LONG-TERM EXPOSURE TO ISOCYANATES HAS BEEN REPORTED TO CAUSE LUNG DAMAGE, INCLUDING REDUCED LUNG FUNCTION WHICH MAY BE PERMANENT. ACUTE OR CHRONIC OVEREXPOSURE TO ISOCYANATES MAY CAUSE SENSITIZATION IN SOME INDIVIDUALS, RESULTING IN ALLERGIC RESPIRATORY REACTIONS INCLUDING WHEEZING, SHORTNESS OF BREATH AND DIFFICULTY BREATHING. ANIMAL TESTS INDICATE THAT SKIN CONTACT MAY PLAY A ROLE IN CAUSING RESPIRATORY SENSITIZATION. AVOID CONTACT WITH SKIN AND EYES. SKIN OR EYE CONTACT MAY CAUSE IRRITATION.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
101-68-8	Diphenylmethane-4,4'-diisocyanate (MDI)	25.0 - 50.0
17589-24-1	1,3-Diazetidone-2,4-dione, 1,3-bis[4-[(4-isocyanatophenyl)methyl]phenyl]-	1.0 - 3.0
26447-40-5	Methylenediphenyl diisocyanate	3.0 - 7.0
57636-09-6	Isocyanic acid, polymethylenepolyphenylene ester, polymer with.alpha.-hydro-.omega.-hydroxypoly(oxy-1,2-ethanediyl)	1.0 - 3.0
9016-87-9	P-MDI	50.0 - 75.0

Section 4 - FIRST AID MEASURES

General advice: Remove contaminated clothing.

EYES: In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Immediate medical attention required.

SKIN: Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

INGESTION: Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required

INHALATION: Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Eye irritation, skin irritation, allergic symptoms

Hazards: Symptoms can appear later.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Hazards: Respiratory sensitization may result in allergic (asthma-like) signs in the lower respiratory tract including wheezing, shortness of breath and difficulty breathing, the onset of which may be delayed. Repeated inhalation of high concentrations may cause lung damage, including reduced lung function, which may be permanent. Substances eliciting lower respiratory tract irritation may worsen the asthma-like reactions that may be produced by product exposures.

Indication of any immediate medical attention and special treatment needed

Note to physician

Antidote: Specific antidotes or neutralizers to isocyanates do not exist.

Treatment: Treatment should be supportive and based on the judgement of the physician in response to the reaction of the patient.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Dry powder, foam, carbon dioxide, water spray.

Special hazards arising from the substance or mixture

Hazards during fire-fighting: nitrous gases, fumes/smoke, isocyanate, vapour

Fire Fighting Measures

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As in any fire, wear self-contained breathing apparatus and full protective gear.

Further information:

Keep containers cool by spraying with water if exposed to fire. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Clear area. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

Environmental precautions

Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

For small amounts: Absorb isocyanate with suitable absorbent material (see § 40 CFR, sections 260, 264 and 265 for further information). Shovel into open container. Do not make container pressure tight. Move container to a well-ventilated area (outside). Spill area can be decontaminated with the following recommended decontamination solution: Mixture of 90 % water, 8 % concentrated ammonia, 2 % detergent. Add at a 10 to 1 ratio. Allow to stand for at least 48 hours to allow escape of evolved carbon dioxide.

For large amounts: If temporary control of isocyanate vapor is required, a blanket of protein foam or other suitable foam (available from most fire departments) may be placed over the spill. Transfer as much liquid as possible via pump or vacuum device into closed but not sealed containers for disposal.

For residues: The following measures should be taken for final cleanup: Wash down spill area with decontamination solution. Allow solution to stand for at least 10 minutes.

Dike spillage.

Section 7 - HANDLING AND STORAGE

Precautions for safe handling

Provide suitable exhaust ventilation at the processing machines. Ensure thorough ventilation of stores and work areas. Avoid aerosol formation. When handling heated product, vapours of the product should be ventilated, and respiratory protection used. Wear respiratory protection when spraying. Danger of bursting when sealed gastight. Protect against moisture. If bulging of drum occurs, transfer to well ventilated area, puncture to relieve pressure, open vent and let stand for 48 hours before resealing.

Protection against fire and explosion:

Storage No explosion proofing necessary.

Conditions for safe storage, including any incompatibilities

Keep away from water. Segregate from foods and animal feeds. Segregate from acids and bases. Segregate from bases.

Suitable materials for containers: Carbon steel (Iron), High density polyethylene (HDPE), Low

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density polyethylene (LDPE), Stainless steel 1.4301 (V2)

Further information on storage conditions: Formation of CO₂ and build up of pressure possible. Keep container tightly closed and in a well-ventilated place. Outage of containers should be filled with dry inert gas at atmospheric pressure to avoid reaction with moisture.

Storage stability:

Storage temperature: 32 - 110 °F

Protect against moisture.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Diphenylmethane-4,4'-diisocyanate (MDI)	101-68-8
OSHA PEL	CLV 0.02 ppm 0.2 mg/m ³
ACGIH TLV	TWA value 0.005 ppm
P-MDI	9016-87-9
OSHA PEL	CLV 0.02 ppm 0.2 mg/m ³
ACGIH TVL	TWA value 0.005 ppm
Isocyanic acid, polymethylene - polyphenylene ester (P-MDI)	57636-09-6
OSHA PEL	CLV 0.02 ppm 0.2 mg/m ³
ACGIH TLV	TWA value 0.005 ppm

Personal protective equipment

Respiratory protection:

When workers are facing concentrations above the occupational exposure limits they must use appropriate certified respirators. When atmospheric levels may exceed the occupational exposure limit (PEL or TLV) NIOSH-certified air-purifying respirators equipped with an organic vapor sorbent and particulate filter can be used as long as appropriate precautions and change out schedules are in place. For

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emergency or non-routine, high exposure situations, including confined space entry, use a NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:

Chemical resistant protective gloves should be worn to prevent all skin contact., Suitable materials may include, chloroprene rubber (Neoprene), nitrile rubber (Buna N), chlorinated polyethylene, polyvinylchloride (Pylox), butyl rubber, depending upon conditions of use.

Eye protection:

Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:

Cover as much of the exposed skin as possible to prevent all skin contact., Suitable materials may include, saran-coated material, depending upon conditions of use.

General safety and hygiene measures:

Wear protective clothing as necessary to prevent contact. Eye wash fountains and safety showers must be easily accessible. Observe the appropriate PEL or TLV value. Wash soiled clothing immediately. Contaminated equipment or clothing should be cleaned after each use or disposed of.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	liquid	Physical State	liquid
Odor	faint aromatic	Color	Dark amber
Boiling Point (@ 5mmHg)	200°C(392°F)	Flammability Limit	Not flammable
Freezing Point (@ 1 ATM)	3°C (37.4°F)	Vapor Pressure (20°C)	0.00016 mmHg
Autoignition	>250 °C (482 °F)	Flash Point	220°C (428 °F)
Solubility in water	Reacts with water	Viscosity, Dynamic (20°C)	200 mPa.s
Vapor Density (air=1)	N/A	Molar Mass	360 g/mol
Density (20°C)	1.22 g/cm ³	pH	N/A
Relative Density(25°C)	1.22	Bulk Density (25°C)	10.17 lb/USg
Thermal decomposition	No decomposition if stored and handled as prescribed.	Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.

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Other Information: If necessary, information on other physical and chemical parameters is indicated in this section

Section 10 - STABILITY AND REACTIVITY

Reactivity

Corrosion to metals: No corrosive effect on metal.

Oxidizing properties: Not fire-propagating

Chemical Stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of Hazardous Reactions

Reacts with water, with formation of carbon dioxide. Risk of bursting. Reacts with alcohols. Reacts with acids. Reacts with alkalis. Reacts with amines. Risk of exothermic reaction. Risk of polymerization.

Contact with certain rubbers and plastics can cause brittleness of the substance/product with subsequent loss in strength.

Conditions to Avoid

Avoid moisture.

Incompatible Materials

Acids, amines, alcohols, water, Alkalines, strong bases, Substances/products that react with isocyanates

Hazardous decomposition products: carbon monoxide, carbon dioxide, nitrogen oxide, hydrogen cyanide, nitrogen oxides, aromatic isocyanates, gases/vapors

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact.

Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Inhalation of vapours may cause irritation of the mucous membranes of the nose, throat or trachea, breathlessness, chest discomfort, difficult breathing and reduced pulmonary function. Inhalation exposure well above the PEL may result additionally in eye irritation, headache, chemical bronchitis, asthma-like findings or pulmonary edema. Isocyanates have also been reported to cause hypersensitivity pneumonitis, which is characterized by flu-like symptoms, the onset of which may be delayed.

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Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Diphenylmethane-4,4'-diisocyanate (MDI) (101-68-8)

Oral LD50 Rat 2000 mg/kg

Dermal LD50 Rabbit >9,400 mg/kg

Inhalation LD50 Rat 2.0 (OECD Guideline 403)

An aerosol was tested

Assessment other acute effects

Assessment of STOT single:

Causes temporary irritation of the respiratory tract.

Irritation / corrosion

Assessment of irritating effects: Irritating to eyes, respiratory system and skin. Skin contact may result in dermatitis, either irritative or allergic.

Skin

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Species: rabbit

Result: Irritating.

Method: Draize test

Eye

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Species: rabbit

Result: Irritating.

Method: Draize test

Sensitization

Assessment of sensitization: Sensitization after skin contact possible. The substance may cause sensitization of the respiratory tract. As a result of previous repeated overexposures or a single large dose, certain individuals will develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the PEL/TLV. These symptoms, which include chest tightness, wheezing, cough, shortness of breath, or asthmatic attack, could be immediate or delayed up to several hours after exposure. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air, or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Chronic overexposure to isocyanates has also been reported to cause lung damage, including a decrease in lung function, which may be permanent. Prolonged contact can cause reddening, swelling, rash, scaling, or blistering. In those who have developed a skin sensitization, these symptoms can develop as a result of contact with very small amounts of liquid material, or even as a result of vapour-only exposure. Animal tests indicate that skin contact may play a role in causing respiratory sensitization.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Buehler test

Species: guinea pig

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Result: sensitizing

Mouse Local Lymph Node Assay (LLNA)

Species: mouse

Result: sensitizin

Can cause skin sensitization

other

Species: guinea pig

Result: sensitizing

Studies in animals suggest that dermal exposure may lead to pulmonary sensitization. However, the relevance of this result for humans is unclear.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: The substance may cause damage to the olfactory epithelium after repeated inhalation. The substance may cause damage to the lung after repeated inhalation. These effects are not relevant to humans at occupational levels of exposure.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Experimental/calculated data: rat (Wistar) (male/female) Inhalation 2 yrs, 6 hr/day 0, 0.2, 1, 6 mg/m³, olfactory epithelium

NOAEL: 0.2 mg/m³

LOAEL: 1 mg/m³

The substance may cause damage to the olfactory epithelium after repeated inhalation. These effects are not relevant to humans at occupational levels of exposure. Repeated inhalative uptake of the substance did not cause damage to the reproductive organs.

Genetic toxicity

Assessment of mutagenicity: The substance was mutagenic in various bacterial test systems; however, these results could not be confirmed in tests with mammals.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Genetic toxicity in vitro: OECD Guideline 471 Ames-test Salmonella typhimurium:with and without metabolic activation ambiguous

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Genetic toxicity in vivo: OECD Guideline 474 Micronucleus assay rat (male) Inhalation negative.

No clastogenic effect reported.

Carcinogenicity

Assessment of carcinogenicity: A carcinogenic potential cannot be excluded after prolonged exposure to severely irritating concentrations. These effects are not relevant to humans at occupational levels of exposure.

Experimental/calculated data: OECD Guideline 453 rat Inhalation 0, 0.2, 1, 6 mg/m³

Result: Lung tumors

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Reproductive toxicity

Assessment of reproduction toxicity: Repeated inhalative uptake of the substance did not cause damage to the reproductive organs.

Teratogenicity

Assessment of teratogenicity: The substance did not cause malformations in animal studies; however, toxicity to development was observed at high doses that were toxic to the parental animals.

Development

OECD Guideline 414 rat Inhalation 0, 1, 4, 12 mg/m³

NOAEL Mat.: 4 mg/m³

NOAEL Teratog.: 4 mg/m³

The substance did not cause malformations in animal studies; however, toxicity to development was observed at high doses that were toxic to the parental animals.

Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Eye irritation, skin irritation, allergic symptoms

Medical conditions aggravated by overexposure

The isocyanate component is a respiratory sensitizer. It may cause allergic reaction leading to asthma-like spasms of the bronchial tubes and difficulty in breathing. Medical supervision of all employees who handle or come into contact with isocyanates is recommended. Contact may aggravate pulmonary disorders. Persons with history of respiratory disease or hypersensitivity should not be exposed to this product. Preemployment and periodic medical examinations with respiratory function tests (FEV₁, FVC as a minimum) are suggested. Persons with asthmatic conditions, chronic bronchitis, other chronic respiratory diseases, recurrent eczema or pulmonary sensitization should be excluded from working with isocyanates. Once a person is diagnosed as having pulmonary sensitization (allergic asthma) to isocyanates, further exposure is not recommended.

Section 12 - ECOLOGICAL INFORMATION

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. Based on long-term (chronic) toxicity study data, the product is very likely not harmful to aquatic organisms.

The product may hydrolyse. The test result maybe partially due to degradation products. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Toxicity to fish

LC₀ (96 h) > 1,000 mg/l, *Brachydanio rerio* (OECD Guideline 203, static)

Aquatic invertebrates

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EC50 (24 h) > 1,000 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

Aquatic plants

EC0 (72 h) 1,640 mg/l (growth rate), Scenedesmus subspicatus (OECD Guideline 201, static)

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

OECD Guideline 209 aquaticaerobic bacteria from a domestic water treatment plant/EC50 (3 h): > 100 mg/l

Persistence and degradability

Assessment biodegradation and elimination (H₂O) Poorly biodegradable. The product is unstable in water. The elimination data also refer to products of hydrolysis.

Elimination information

0 % BOD of the ThOD (28 d) (OECD Guideline 302 C) (aerobic, activated sludge) Poorly biodegradable.

Assessment of stability in water

In contact with water the substance will hydrolyse slowly.

Information on Stability in Water (Hydrolysis)

t_{1/2} 20 h (25 °C)

Bioaccumulative potential

Assessment bioaccumulation potential

Significant accumulation in organisms is not to be expected.

Bioaccumulation potential

Bioconcentration factor: 200 (28 d), Cyprinus carpio (OECD Guideline 305 E)

Mobility in soil

Assessment transport between environmental compartments.

The substance will not evaporate into the atmosphere from the water surface. Adsorption to solid soil phase is not expected.

Section 13 - DISPOSAL CONSIDERATIONS

Waste disposal of substance:

Incinerate or dispose of in a licensed facility. Do not discharge substance/product into sewer system.

Container disposal:

DRUMS:

Steel drums must be emptied and can be sent to a licensed drum reconditioner for reuse, a scrap metal dealer or an approved landfill. Do not attempt to refill or clean containers since residue is difficult to



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remove. Under no circumstances should empty drums be burned or cut open with gas or electric torch as toxic decomposition products may be liberated. Do not reuse empty containers.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

Not classified as a dangerous good under transport regulations

Sea transport IMDG

Not classified as a dangerous good under transport regulations

Air transportation IATA/ICAO

Not classified as a dangerous good under transport regulations

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

Registration status:

Chemical TSCA, US released / listed.

EPCRA 311/312 (Hazard categories)

Acute;Chronic

EPCRA SECTION 313 SUPPLIER NOTIFICATION

Chemical Name	CAS
Diphenylmethane-4,4'-diisocyanate (MDI)	101-68-8
P-MDI	9016-87-9

CERCLA-RQ (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

Chemical Name	CAS	CERCLA RQ
Diphenylmethane-4,4'-diisocyanate (MDI);	101-68-8	5000 lbs
P-MDI	9016-87-9	5,000 lbs

Reportable Quantity for release: 13,157.9 lb

STATE REGULATIONS

Chemical Name	CAS	State RTK
Diphenylmethane-4,4'-diisocyanate (MDI);	101-68-8	MA, NJ, PA
P-MDI	9016-87-9	MA, NJ, PA
Methylenediphenyl diisocyanate	26447-40-5	NJ

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Section 16 - OTHER INFORMATION

HMIS Rating

Health: 2 Fire: 1 Physical Hazard: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 2 Fire: 1 Reactivity: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

New SDS: April 17, 2015

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition



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that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name: Flexible FAST Bag in a Box Part B

Synonyms: Polyol Blend.

Chemical Family: Polyol Blend

Product Use: Commercial Roofing Adhesive

Restrictions on Use: Professional use only

Manufacturer Information

Carlisle SynTec
1285 Ritner Highway
Carlisle, PA 17013
USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

None needed according to classification criteria

GHS Label Elements

Symbol(s)

None needed according to classification criteria

Signal Word

None needed according to classification criteria

Hazard Statement(s)

None needed according to classification criteria

Precautionary Statement(s)

Prevention

None needed according to classification criteria

Response

None needed according to classification criteria

Storage

None needed according to classification criteria

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

Other Hazards

No additional information available.

Safety Data Sheet

Material Name: Flexible FAST Bag in a Box Part B

Product # 322957

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
25265-71-8	Dipropylene glycol	5-10
13674-84-5	2-Propanol, 1-chloro-, phosphate (3:1)	10-20
280-57-9	1,4-Diazabicyclo[2.2.2]octane	0.1-1
108-01-0	2-(Dimethylamino)ethanol	0.1-1

Section 4 - FIRST AID MEASURES

Description of Necessary Measures

IF exposed or concerned: Get medical advice/attention.

Inhalation

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician.

Skin

Wash with plenty of soap and water. If skin irritation occurs, get medical advice/attention.

Eyes

Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Ingestion

Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Most Important Symptoms/Effects

Acute

No information on significant adverse effects.

Delayed

No information on significant adverse effects.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

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Material Name: Flexible FAST Bag in a Box Part B

Product # 322957

Suitable Extinguishing Media

regular dry chemical, carbon dioxide, water, regular foam

Unsuitable Extinguishing Media

None known.

Special Hazards Arising from the Chemical

Closed containers may rupture violently when heated.

Hazardous Combustion Products

Oxides of carbon, oxides of phosphorus, hydrogen halides

Special Protective Equipment and Precautions for Firefighters

Wear self-contained breathing apparatus with a full facepiece and protective clothing.

Fire Fighting Measures

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up

Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering. Do not touch or walk through spilled material. Stop leak if possible without personal risk. Small spills: Absorb with earth, sand or other non-combustible material and transfer to container. Large spills: Dike for later disposal. Eliminate all sources of ignition. Do not flush into sanitary sewer systems, drains or surface water.

Environmental Precautions

Avoid release to the environment.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Do not eat, drink, or smoke when using this product. Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Use only in well ventilated areas. Wear protective gloves/clothing and eye/face protection. Wash contaminated clothing before reuse.

Conditions for Safe Storage, Including any Incompatibilities

None needed according to classification criteria

Store between 65°F-85°F (18°C-30°C). Store in a dry place. Keep away from incompatible materials.

Incompatible Materials

Strong oxidizing materials, isocyanates, strong acids, strong bases

Safety Data Sheet

Material Name: Flexible FAST Bag in a Box Part B

Product # 322957

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

ACGIH, NIOSH, EU, OSHA (US) and Mexico have not developed exposure limits for any of this product's components

Biological limit value

There are no biological limit values for any of this product's components.

Engineering Controls

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin Protection

Wear chemical resistant clothing and rubber boots when potential for contact with the material exists. Thoroughly clean and dry contaminated clothing and shoes before reuse.

Respiratory Protection

In case of inadequate ventilation wear respiratory protection.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	blue liquid	Physical State	liquid
Odor	musty, amine	Color	blue
Odor Threshold	Not available	pH	Not available
Melting Point	Not available	Boiling Point	>100 °C
Freezing point	Not available	Evaporation Rate	slower than ether
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	Not available	Flash Point	>201 °F [(CC)]
Lower Explosive Limit	Not available	Decomposition	Not available
Upper Explosive Limit	Not available	Vapor Pressure	Not available

Safety Data Sheet

Material Name: Flexible FAST Bag in a Box Part B

Product # 322957

Vapor Density (air=1)	>1	Specific Gravity (water=1)	1.1058
Water Solubility	soluble	Partition coefficient: n-octanol/water	Not available
Viscosity	250 cps	Solubility (Other)	Not available
Density	9.23 lb/gal at @ 25°C	Physical Form	liquid
VOC	0 g/l		

Other Information

No additional information available.

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable at normal temperatures and pressure.

Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Prolonged heating above 160°C or storage below 5°C. Avoid heat, flames, sparks and other sources of ignition.

Incompatible Materials

Strong acids, strong bases, strong oxidizing materials, isocyanates

Hazardous decomposition products

Oxides of hydrogen, oxides of phosphorus, hydrogen halides

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

Vapor or mist may cause respiratory tract irritation.

Skin Contact

May cause mild skin irritation.

Eye Contact

May cause mild eye irritation.

Ingestion

May cause gastrointestinal disturbances, nausea, vomiting, and diarrhea.

Safety Data Sheet

Material Name: Flexible FAST Bag in a Box Part B

Product # 322957

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Dipropylene glycol (25265-71-8)

Oral LD50 Rat 14800 mg/kg

Dermal LD50 Rabbit >5000 mg/kg

2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)

Oral LD50 Rat 630 mg/kg

Dermal LD50 Rabbit >2000 mg/kg

Inhalation LC50 Rat >7 mg/L 4 h

1,4-Diazabicyclo[2.2.2]octane (280-57-9)

Oral LD50 Rat 1700 mg/kg

Dermal LD50 Rabbit 3200 mg/kg

2-(Dimethylamino)ethanol (108-01-0)

Oral LD50 Rat 1803 mg/kg

Dermal LD50 Rabbit 1220 mg/kg

Inhalation LC50 Rat 1641 ppm 4 h

Water (7732-18-5)

Oral LD50 Rat >90 mL/kg

Immediate Effects

No information on significant adverse effects.

Delayed Effects

No information on significant adverse effects.

Irritation/Corrosivity Data

May cause respiratory tract irritation, skin irritation, and eye irritation.

Respiratory Sensitization

No information available for the product.

Dermal Sensitization

No information available for the product.

Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, NTP, DFG or OSHA

Germ Cell Mutagenicity

No information available for the product.

Reproductive Toxicity

No information available for the product.

Specific Target Organ Toxicity - Single Exposure

No target organs identified.

Safety Data Sheet

Material Name: Flexible FAST Bag in a Box Part B

Product # 322957

Specific Target Organ Toxicity - Repeated Exposure

No target organs identified.

Aspiration hazard

No information available for the product.

Medical Conditions Aggravated by Exposure

None reported.

Additional Data

No additional information available.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

Avoid release to the environment.

Component Analysis - Aquatic Toxicity

2-Propanol, 1-chloro-, phosphate (3:1)	13674-84-5
Fish:	LC50 96 h Brachydanio rerio 56.2 mg/L [static]; LC50 96 h Pimephales promelas 98 mg/L [static]; LC50 96 h Poecilia reticulata 30 mg/L [static]
Algae:	EC50 72 h Desmodesmus subspicatus 45 mg/L IUCLID; EC50 96 h Pseudokirchneriella subcapitata 4 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 63 mg/L IUCLID
1,4-Diazabicyclo[2.2.2]octane	280-57-9
Fish:	LC50 96 h Pimephales promelas 1510 - 1980 mg/L [flow-through]
2-(Dimethylamino)ethanol	108-01-0
Fish:	LC50 96 h Pimephales promelas 81 mg/L [static]
Algae:	EC50 72 h Desmodesmus subspicatus 35 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 98.77 mg/L IUCLID

Persistence and Degradability

No information available for the product.

Bioaccumulative Potential

No information available for the product.



Safety Data Sheet

Material Name: Flexible FAST Bag in a Box Part B

Product # 322957

Mobility

No information available for the product.

Bioconcentration

No information available for the product.

Other Toxicity

No additional information available.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose in accordance with all applicable regulations.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

UN/NA #: Not regulated.

IATA Information:

No Classification assigned.

TDG Information:

UN#: Not regulated.

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: Yes **Chronic Health:** Yes **Fire:** No **Pressure:** No **Reactivity:** No

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Dipropylene glycol	25265-71-8	No	No	No	No	Yes
2-(Dimethylamino)ethanol	108-01-0	No	Yes	No	Yes	Yes

Not listed under California Proposition 65

Canadian WHMIS Ingredient Disclosure List (IDL)

Safety Data Sheet

Material Name: Flexible FAST Bag in a Box Part B

Product # 322957

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

1,4-Diazabicyclo[2.2.2]octane	280-57-9
	1 %

WHMIS Classification

D2A, D2B.

Component Analysis - Inventory

Oxirane, methyl-, polymer with oxirane (9003-11-6)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

Dipropylene glycol (25265-71-8)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Siloxanes and Silicones, dimethyl, 3-hydroxypropyl methyl, ethoxylated propoxylated (68937-55-3)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

Oxirane, methyl-, polymer with oxirane, mono-2-propenyl ether (9041-33-2)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

1,4-Diazabicyclo[2.2.2]octane (280-57-9)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX



Safety Data Sheet

Material Name: Flexible FAST Bag in a Box Part B

Product # 322957

Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes
-----	-----	-----	-----	-----	-----	----	-----	----	-----	-----	-----

2-(Dimethylamino)ethanol (108-01-0)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Water (7732-18-5)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes

Section 16 - OTHER INFORMATION

NFPA Ratings

Health: 2 Fire: 1 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

New 3/24/2015

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.



Safety Data Sheet

Material Name: Flexible FAST Bag in a Box Part B

Product # 322957

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name: FAST Catalyst

Synonym: Polyol/catalyst blend

Product Use: Two-part adhesive for roofing systems

Restrictions on Use: For industrial use only.

Manufacturer Information

Carlisle SynTec

1285 Ritner Highway

Carlisle, PA 17013

USA

Phone: +1-800-479-6832

Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Skin Corrosive/Irritation - Category 2

Eye Damage/Irritation - Category 1

GHS Label Elements

Symbol(s)



Signal Word

Danger

Hazard Statement:

H318 Causes serious eye damage.

H315 Causes skin irritation.

Precautionary Statements (Prevention):

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P264 Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

P303 + P352 IF ON SKIN (or hair): Wash with plenty of soap and water.

P362 + P364 Take off contaminated clothing and wash before reuse.

Safety Data Sheet

Material Name: **FAST Catalyst**

Product #: **303436**

Hazards not otherwise classified

No specific dangers known, if the regulations/notes for storage and handling are considered.

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Emergency overview

WARNING:

CAUSES IRREVERSIBLE EYE DAMAGE.

CAUSES SKIN IRRITATION.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

CAS	Component Name	Percent
280-57-9	triethylenediamine	>= 15.0 - < 20.0 %
25265-71-8	dipropylene glycol	>= 25.0 - < 50.0 %

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

CAS	Component Name	Percent
280-57-9	triethylenediamine	>= 15.0 - < 20.0 %
25265-71-8	dipropylene glycol	>= 25.0 - < 50.0 %
Trade Secret	Polyol	>= 25.0 - < 50.0 %

Section 4 - FIRST AID MEASURES

General advice:

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention. Immediately administer a corticosteroid from a controlled/metered dose inhaler.

If in eyes:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If on skin:

Immediately wash thoroughly with plenty of water, apply sterile dressings, consult a skin specialist.

Safety Data Sheet

Material Name: FAST Catalyst

Product #: 303436

If swallowed:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention. Do not induce vomiting.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Hazards: No hazards anticipated.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Dry powder, foam, carbon dioxide, water spray.

Special hazards arising from the substance or mixture

Hazards during fire-fighting: No particular hazards known.

Fire Fighting Measures

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Section 6 - ACCIDENTAL RELEASE MEASURES

Further accidental release measures:

High risk of slipping due to leakage/spillage of product.

Personal precautions, protective equipment and emergency procedures

Wear suitable personal protective clothing

Environmental precautions

Do not empty into drains. Do not discharge into the subsoil/soil.

Methods and material for containment and cleaning up

Spills should be contained, solidified, and placed in suitable containers for disposal.

Section 7 - HANDLING AND STORAGE

Precautions for safe handling

Ensure thorough ventilation of stores and work areas. Protect against moisture. Protection against fire and explosion: No explosion proofing necessary.

Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds. Segregate from acids. Segregate from oxidants.

Suitable materials for containers: Carbon steel (Iron), High density polyethylene (HDPE), Low density polyethylene (LDPE), Stainless steel 1.4301 (V2).

Further information on storage conditions: No special precautions necessary. Avoid extreme heat. Store protected against freezing.

Storage stability:

Storage temperature: 60 - 80 °F

Protect against moisture.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits**Advice on system design:**

Provide local exhaust ventilation to control vapors/mists.

Personal protective equipment**Respiratory protection:**

Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator as needed.

Hand protection:

Chemical resistant protective gloves.

Eye protection:

Wear face shield or tightly fitting safety goggles (chemical goggles) if splashing hazard exists.

Body protection:

Standard work clothes and shoes.

General safety and hygiene measures:

Avoid contact with skin. Handle in accordance with good industrial hygiene and safety practice. Wear protective clothing as necessary to prevent contact. Avoid inhalation of vapours/mists. Wash soiled clothing immediately.

Safety Data Sheet

Material Name: FAST Catalyst

Product #: 303436

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	liquid	Physical State	liquid
Odor	ammonia-like	Color	straw yellow
Boiling Point	> 140 °C(284 °F)	Flammability Limit	Not flammable
Freezing Point	Not applicable	Vapor Pressure(25°C)	< 0.1 hPa
Autoignition	>250 °C (482 °F)	Flash Point	200°C (392 °F)
Solubility in water	Slightly soluble	Viscosity, Dynamic (25°C)	400 - 500 mPa.s
Vapor Density	Not applicable	pH	>= 7
Density (25°C)	8.40 lb/USg	Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.
Thermal decomposition	No decomposition if stored and handled as prescribed/indicated.	Relative Density	Not applicable

Other Information: If necessary, information on other physical and chemical parameters is indicated in this section

Section 10 - STABILITY AND REACTIVITY

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:

No corrosive effect on metal.

Oxidizing properties:

not fire-propagating

Chemical Stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of Hazardous Reactions

No hazardous reactions if stored and handled as prescribed/indicated.

Conditions to Avoid

Temperature: < 0 degrees Celsius

Material Name: FAST Catalyst

Product #: 303436

Incompatible Materials

Acids, oxidizing agents, isocyanates

Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: carbon monoxide, carbon dioxide, nitrogen oxide, hydrogen cyanide

Thermal decomposition:

No decomposition if stored and handled as prescribed/indicated.

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure**Primary routes of exposure**

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects**Acute toxicity**

Assessment of acute toxicity: No known acute effects.

Oral

No applicable information available.

Inhalation

No applicable information available.

Dermal

No applicable information available.

Assessment other acute effects

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Origin of data: expert judgement**Irritation / corrosion**

Assessment of irritating effects: Skin contact causes irritation. May cause severe damage to the eyes.

Sensitization

Assessment of sensitization: The chemical structure does not suggest a sensitizing effect. No applicable information available.

Material Name: FAST Catalyst

Product #: 303436

Aspiration Hazard

No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: Repeated oral uptake of the substance did not cause substance-related effects. Repeated inhalative uptake of the substance did not cause substance related effects.

Genetic toxicity

Assessment of mutagenicity: The chemical structure does not suggest a specific alert for such an effect. No applicable information available.

Carcinogenicity

Assessment of carcinogenicity: The chemical structure does not suggest a specific alert for such an effect. No applicable information available.

Reproductive toxicity

Assessment of reproduction toxicity: The chemical structure does not suggest a specific alert for such an effect. No applicable information available.

Teratogenicity

Assessment of teratogenicity: The chemical structure does not suggest a specific alert for such an effect. No applicable information available.

Other Information

The product has not been tested. The statement has been derived from the properties of the individual components.

Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Eye irritation, skin irritation, allergic symptoms

Medical conditions aggravated by overexposure

Data available do not indicate that there are medical conditions that are generally recognized as being aggravated by exposure to this substance/product.

Section 12 - ECOLOGICAL INFORMATION

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms.

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Persistence and degradability

Assessment biodegradation and elimination (H₂O) Poorly biodegradable.

Material Name: FAST Catalyst

Product #: 303436

Elimination information

Poorly biodegradable.

Bioaccumulative potential

Does not significantly accumulate in organisms.

Mobility in soil

Assessment transport between environmental compartments
Adsorption to solid soil phase is not expected.

Additional information

Adsorbable organically-bound halogen (AOX):

This product contains no organically-bound halogen.

Other ecotoxicological advice:

The product has not been tested. Do not discharge product into the environment without control.

Section 13 - DISPOSAL CONSIDERATIONS

Waste disposal of substance:

Incinerate or dispose of in a licensed facility. Do not discharge substance/product into sewer system.

Container disposal:

DRUMS:

Steel drums must be emptied and can be sent to a licensed drum reconditioner for reuse, a scrap metal dealer or an approved landfill. Do not attempt to refill or clean containers since residue is difficult to remove. Under no circumstances should empty drums be burned or cut open with gas or electric torch as toxic decomposition products may be liberated. Do not reuse empty containers.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

Not classified as a dangerous good under transport regulations

Sea transport IMDG

Not classified as a dangerous good under transport regulations

Air transportation IATA/ICAO

Not classified as a dangerous good under transport regulations

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

Registration status:

Chemical TSCA, US released / listed.

Safety Data Sheet

Material Name: **FAST Catalyst**

Product #: 303436

EPCRA 311/312 (Hazard categories)

Acute

STATE REGULATIONS

Chemical Name	CAS	State RTK
dipropylene glycol	25265-71-8	PA
triethylenediamine	280-57-9	NJ

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 3 Fire: 1 Physical Hazard: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 3 Fire: 1 Reactivity: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

New SDS: May 17, 2015

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or



Safety Data Sheet

Material Name: FAST Catalyst

Product #: 303436

implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name: FAST Dual Cartridge Adhesive Part A

Synonym: Polymethylene Polyphenylisocyanate

Chemical Family: Aromatic isocyanates

Product Use: Two-part adhesive for roofing systems

Restrictions on Use: For industrial use only.

Manufacturer Information

Carlisle SynTec

1285 Ritner Highway

Carlisle, PA 17013

USA

Phone: +1-800-479-6832

Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Acute Toxicity- Category 4 (Inhalation- mist)

Skin Corrosive/Irritation - Category 2

Eye Damage/Irritation - Category 2B

Specific Target Organ Toxicity - Single Exposure –(Irritating to respiratory system)-Category 3

Specific Target Organ Toxicity - Repeated Exposure –(by inhalation)-Category 2

Skin Sensitivity - Category 1B

Respiratory Sensitization- Category 1

Carcinogenicity-Category 2

GHS Label Elements

Symbol(s)



Signal Word

Danger

Hazard Statement:

H320 Causes eye irritation.

H315 Causes skin irritation.

H332 Harmful if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

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H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs (Olfactory organs) through prolonged or repeated exposure (inhalation).

Precautionary Statements (Prevention):

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P271 Use only outdoors or in a well-ventilated area.
P260 Do not breathe dust/gas/mist/vapours.
P201 Obtain special instructions before use.
P261 Avoid breathing mist.
P202 Do not handle until all safety precautions have been read and understood.
P284 [In case of inadequate ventilation] wear respiratory protection.
P272 Contaminated work clothing should not be allowed out of the workplace.
P264 Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308 + P311 IF exposed or concerned: Call a POISON CENTER or doctor/physician.
P314 Get medical advice/attention if you feel unwell.
P303 + P352 IF ON SKIN (or hair): Wash with plenty of soap and water.
P333 + P311 If skin irritation or rash occurs: Call a POISON CENTER or doctor/physician.
P362 + P364 Take off contaminated clothing and wash before reuse.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P337 + P311 If eye irritation persists: Call a POISON CENTER or doctor/physician.

Precautionary Statements (Storage):

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Precautionary Statements (Disposal):

P501 Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified

No specific dangers known, if the regulations/notes for storage and handling are considered.

Labeling of special preparations (GHS):

CONTAINS ISOCYANATES. INHALATION OF ISOCYANATE MISTS OR VAPORS MAY CAUSE RESPIRATORY IRRITATION, BREATHELESSNESS, CHEST DISCOMFORT AND REDUCED PULMONARY FUNCTION. OVEREXPOSURE WELL ABOVE THE PEL MAY RESULT IN BRONCHITIS, BRONCHIAL SPASMS AND PULMONARY EDEMA. LONG-TERM EXPOSURE TO ISOCYANATES HAS BEEN REPORTED TO CAUSE LUNG DAMAGE, INCLUDING REDUCED LUNG FUNCTION WHICH MAY BE PERMANENT. ACUTE OR CHRONIC OVEREXPOSURE TO ISOCYANATES MAY CAUSE SENSITIZATION IN SOME INDIVIDUALS, RESULTING IN ALLERGIC RESPIRATORY REACTIONS INCLUDING WHEEZING,

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SHORTNESS OF BREATH AND DIFFICULTY BREATHING. ANIMAL TESTS INDICATE THAT SKIN CONTACT MAY PLAY A ROLE IN CAUSING RESPIRATORY SENSITIZATION. ANIMAL TESTS AND OTHER RESEARCH INDICATE THAT SKIN CONTACT WITH MDI MAY PLAY A ROLE IN CAUSING RESPIRATORY SENSITIZATION.

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Emergency overview

DANGER:
 CONTAINS ISOCYANATES. INHALATION OF ISOCYANATE MISTS OR VAPORS MAY CAUSE RESPIRATORY IRRITATION, BREATHELESSNESS, CHEST DISCOMFORT AND REDUCED PULMONARY FUNCTION. OVEREXPOSURE WELL ABOVE THE PEL MAY RESULT IN BRONCHITIS, BRONCHIAL SPASMS AND PULMONARY EDEMA. LONG-TERM EXPOSURE TO ISOCYANATES HAS BEEN REPORTED TO CAUSE LUNG DAMAGE, INCLUDING REDUCED LUNG FUNCTION WHICH MAY BE PERMANENT. ACUTE OR CHRONIC OVEREXPOSURE TO ISOCYANATES MAY CAUSE SENSITIZATION IN SOME INDIVIDUALS, RESULTING IN ALLERGIC RESPIRATORY REACTIONS INCLUDING WHEEZING, SHORTNESS OF BREATH AND DIFFICULTY BREATHING. ANIMAL TESTS INDICATE THAT SKIN CONTACT MAY PLAY A ROLE IN CAUSING RESPIRATORY SENSITIZATION. AVOID CONTACT WITH SKIN AND EYES. SKIN OR EYE CONTACT MAY CAUSE IRRITATION.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
101-68-8	Diphenylmethane-4,4'-diisocyanate (MDI)	25.0 - 50.0
17589-24-1	1,3-Diazetidone-2,4-dione, 1,3-bis[4-[(4-isocyanatophenyl)methyl]phenyl]-	1.0 - 3.0
26447-40-5	Methylenediphenyl diisocyanate	3.0 - 7.0
57636-09-6	Isocyanic acid, polymethylenepolyphenylene ester, polymer with.alpha.-hydro-.omega.-hydroxypoly(oxy-1,2-ethanediyl)	1.0 - 3.0
9016-87-9	P-MDI	50.0 - 75.0

Section 4 - FIRST AID MEASURES

General advice: Remove contaminated clothing.

EYES: In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Immediate medical attention required.

SKIN: Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

INGESTION: Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required

INHALATION: Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Eye irritation, skin irritation, allergic symptoms

Hazards: Symptoms can appear later.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Hazards: Respiratory sensitization may result in allergic (asthma-like) signs in the lower respiratory tract including wheezing, shortness of breath and difficulty breathing, the onset of which may be delayed. Repeated inhalation of high concentrations may cause lung damage, including reduced lung function, which may be permanent. Substances eliciting lower respiratory tract irritation may worsen the asthma-like reactions that may be produced by product exposures.

Indication of any immediate medical attention and special treatment needed

Note to physician

Antidote: Specific antidotes or neutralizers to isocyanates do not exist.

Treatment: Treatment should be supportive and based on the judgement of the physician in response to the reaction of the patient.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Dry powder, foam, carbon dioxide, water spray.

Special hazards arising from the substance or mixture

Hazards during fire-fighting: nitrous gases, fumes/smoke, isocyanate, vapour

Fire Fighting Measures

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As in any fire, wear self-contained breathing apparatus and full protective gear.

Further information:

Keep containers cool by spraying with water if exposed to fire. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Clear area. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

Environmental precautions

Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

For small amounts: Absorb isocyanate with suitable absorbent material (see § 40 CFR, sections 260, 264 and 265 for further information). Shovel into open container. Do not make container pressure tight. Move container to a well-ventilated area (outside). Spill area can be decontaminated with the following recommended decontamination solution: Mixture of 90 % water, 8 % concentrated ammonia, 2 % detergent. Add at a 10 to 1 ratio. Allow to stand for at least 48 hours to allow escape of evolved carbon dioxide.

For large amounts: If temporary control of isocyanate vapor is required, a blanket of protein foam or other suitable foam (available from most fire departments) may be placed over the spill. Transfer as much liquid as possible via pump or vacuum device into closed but not sealed containers for disposal.

For residues: The following measures should be taken for final cleanup: Wash down spill area with decontamination solution. Allow solution to stand for at least 10 minutes.

Dike spillage.

Section 7 - HANDLING AND STORAGE

Precautions for safe handling

Provide suitable exhaust ventilation at the processing machines. Ensure thorough ventilation of stores and work areas. Avoid aerosol formation. When handling heated product, vapours of the product should be ventilated, and respiratory protection used. Wear respiratory protection when spraying. Danger of bursting when sealed gastight. Protect against moisture. If bulging of drum occurs, transfer to well ventilated area, puncture to relieve pressure, open vent and let stand for 48 hours before resealing.

Protection against fire and explosion:

Storage No explosion proofing necessary.

Conditions for safe storage, including any incompatibilities

Keep away from water. Segregate from foods and animal feeds. Segregate from acids and bases. Segregate from bases.

Suitable materials for containers: Carbon steel (Iron), High density polyethylene (HDPE), Low

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density polyethylene (LDPE), Stainless steel 1.4301 (V2)

Further information on storage conditions: Formation of CO₂ and build up of pressure possible. Keep container tightly closed and in a well-ventilated place. Outage of containers should be filled with dry inert gas at atmospheric pressure to avoid reaction with moisture.

Storage stability:
 Storage temperature: 32 - 110 °F
 Protect against moisture.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Diphenylmethane-4,4'-diisocyanate (MDI)	101-68-8
OSHA PEL	CLV 0.02 ppm 0.2 mg/m ³
ACGIH TLV	TWA value 0.005 ppm
P-MDI	9016-87-9
OSHA PEL	CLV 0.02 ppm 0.2 mg/m ³
ACGIH TVL	TWA value 0.005 ppm
Isocyanic acid, polymethylene - polyphenylene ester (P-MDI)	57636-09-6
OSHA PEL	CLV 0.02 ppm 0.2 mg/m ³
ACGIH TLV	TWA value 0.005 ppm

Personal protective equipment

Respiratory protection:

When workers are facing concentrations above the occupational exposure limits they must use appropriate certified respirators. When atmospheric levels may exceed the occupational exposure limit (PEL or TLV) NIOSH-certified air-purifying respirators equipped with an organic vapor sorbent and particulate filter can be used as long as appropriate precautions and change out schedules are in place. For

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emergency or non-routine, high exposure situations, including confined space entry, use a NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:

Chemical resistant protective gloves should be worn to prevent all skin contact., Suitable materials may include, chloroprene rubber (Neoprene), nitrile rubber (Buna N), chlorinated polyethylene, polyvinylchloride (Pylox), butyl rubber, depending upon conditions of use.

Eye protection:

Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:

Cover as much of the exposed skin as possible to prevent all skin contact., Suitable materials may include, saran-coated material, depending upon conditions of use.

General safety and hygiene measures:

Wear protective clothing as necessary to prevent contact. Eye wash fountains and safety showers must be easily accessible. Observe the appropriate PEL or TLV value. Wash soiled clothing immediately. Contaminated equipment or clothing should be cleaned after each use or disposed of.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	liquid	Physical State	liquid
Odor	faint aromatic	Color	Dark amber
Boiling Point (@ 5mmHg)	200°C(392°F)	Flammability Limit	Not flammable
Freezing Point (@ 1 ATM)	3°C (37.4°F)	Vapor Pressure (20°C)	0.00016 mmHg
Autoignition	>250 °C (482 °F)	Flash Point	220°C (428 °F)
Solubility in water	Reacts with water	Viscosity, Dynamic (20°C)	200 mPa.s
Vapor Density (air=1)	N/A	Molar Mass	360 g/mol
Density (20°C)	1.22 g/cm ³	pH	N/A
Relative Density(25°C)	1.22	Bulk Density (25°C)	10.17 lb/USg
Thermal decomposition	No decomposition if stored and handled as prescribed.	Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.

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Other Information: If necessary, information on other physical and chemical parameters is indicated in this section

Section 10 - STABILITY AND REACTIVITY

Reactivity

Corrosion to metals: No corrosive effect on metal.

Oxidizing properties: Not fire-propagating

Chemical Stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of Hazardous Reactions

Reacts with water, with formation of carbon dioxide. Risk of bursting. Reacts with alcohols. Reacts with acids. Reacts with alkalis. Reacts with amines. Risk of exothermic reaction. Risk of polymerization. Contact with certain rubbers and plastics can cause brittleness of the substance/product with subsequent loss in strength.

Conditions to Avoid

Avoid moisture.

Incompatible Materials

Acids, amines, alcohols, water, Alkalines, strong bases, Substances/products that react with isocyanates

Hazardous decomposition products: carbon monoxide, carbon dioxide, nitrogen oxide, hydrogen cyanide, nitrogen oxides, aromatic isocyanates, gases/vapors

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Inhalation of vapours may cause irritation of the mucous membranes of the nose, throat or trachea, breathlessness, chest discomfort, difficult breathing and reduced pulmonary function. Inhalation exposure well above the PEL may result additionally in eye irritation, headache, chemical bronchitis, asthma-like findings or pulmonary edema. Isocyanates have also been reported to cause hypersensitivity pneumonitis, which is characterized by flu-like symptoms, the onset of which may be delayed.

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Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Diphenylmethane-4,4'-diisocyanate (MDI) (101-68-8)

Oral LD50 Rat 2000 mg/kg

Dermal LD50 Rabbit >9,400 mg/kg

Inhalation LD50 Rat 2.0 (OECD Guideline 403)

An aerosol was tested

Assessment other acute effects

Assessment of STOT single:

Causes temporary irritation of the respiratory tract.

Irritation / corrosion

Assessment of irritating effects: Irritating to eyes, respiratory system and skin. Skin contact may result in dermatitis, either irritative or allergic.

Skin

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Species: rabbit

Result: Irritating.

Method: Draize test

Eye

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Species: rabbit

Result: Irritating.

Method: Draize test

Sensitization

Assessment of sensitization: Sensitization after skin contact possible. The substance may cause sensitization of the respiratory tract. As a result of previous repeated overexposures or a single large dose, certain individuals will develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the PEL/TLV. These symptoms, which include chest tightness, wheezing, cough, shortness of breath, or asthmatic attack, could be immediate or delayed up to several hours after exposure. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air, or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Chronic overexposure to isocyanates has also been reported to cause lung damage, including a decrease in lung function, which may be permanent. Prolonged contact can cause reddening, swelling, rash, scaling, or blistering. In those who have developed a skin sensitization, these symptoms can develop as a result of contact with very small amounts of liquid material, or even as a result of vapour-only exposure. Animal tests indicate that skin contact may play a role in causing respiratory sensitization.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Buehler test

Species: guinea pig

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Result: sensitizing

Mouse Local Lymph Node Assay (LLNA)

Species: mouse

Result: sensitizin

Can cause skin sensitization

other

Species: guinea pig

Result: sensitizing

Studies in animals suggest that dermal exposure may lead to pulmonary sensitization. However, the relevance of this result for humans is unclear.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: The substance may cause damage to the olfactory epithelium after repeated inhalation. The substance may cause damage to the lung after repeated inhalation. These effects are not relevant to humans at occupational levels of exposure.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Experimental/calculated data: rat (Wistar) (male/female) Inhalation 2 yrs, 6 hr/day 0, 0.2, 1, 6 mg/m³, olfactory epithelium

NOAEL: 0.2 mg/m³

LOAEL: 1 mg/m³

The substance may cause damage to the olfactory epithelium after repeated inhalation. These effects are not relevant to humans at occupational levels of exposure. Repeated inhalative uptake of the substance did not cause damage to the reproductive organs.

Genetic toxicity

Assessment of mutagenicity: The substance was mutagenic in various bacterial test systems; however, these results could not be confirmed in tests with mammals.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Genetic toxicity in vitro: OECD Guideline 471 Ames-test Salmonella typhimurium:with and without metabolic activation ambiguous

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Genetic toxicity in vivo: OECD Guideline 474 Micronucleus assay rat (male) Inhalation negative.

No clastogenic effect reported.

Carcinogenicity

Assessment of carcinogenicity: A carcinogenic potential cannot be excluded after prolonged exposure to severely irritating concentrations. These effects are not relevant to humans at occupational levels of exposure.

Experimental/calculated data: OECD Guideline 453 rat Inhalation 0, 0.2, 1, 6 mg/m³

Result: Lung tumors

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Reproductive toxicity

Assessment of reproduction toxicity: Repeated inhalative uptake of the substance did not cause damage to the reproductive organs.

Teratogenicity

Assessment of teratogenicity: The substance did not cause malformations in animal studies; however, toxicity to development was observed at high doses that were toxic to the parental animals.

Development

OECD Guideline 414 rat Inhalation 0, 1, 4, 12 mg/m³

NOAEL Mat.: 4 mg/m³

NOAEL Teratog.: 4 mg/m³

The substance did not cause malformations in animal studies; however, toxicity to development was observed at high doses that were toxic to the parental animals.

Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Eye irritation, skin irritation, allergic symptoms

Medical conditions aggravated by overexposure

The isocyanate component is a respiratory sensitizer. It may cause allergic reaction leading to asthma-like spasms of the bronchial tubes and difficulty in breathing. Medical supervision of all employees who handle or come into contact with isocyanates is recommended. Contact may aggravate pulmonary disorders. Persons with history of respiratory disease or hypersensitivity should not be exposed to this product. Preemployment and periodic medical examinations with respiratory function tests (FEV₁, FVC as a minimum) are suggested. Persons with asthmatic conditions, chronic bronchitis, other chronic respiratory diseases, recurrent eczema or pulmonary sensitization should be excluded from working with isocyanates. Once a person is diagnosed as having pulmonary sensitization (allergic asthma) to isocyanates, further exposure is not recommended.

Section 12 - ECOLOGICAL INFORMATION

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. Based on long-term (chronic) toxicity study data, the product is very likely not harmful to aquatic organisms.

The product may hydrolyse. The test result maybe partially due to degradation products. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Toxicity to fish

LC₀ (96 h) > 1,000 mg/l, Brachydanio rerio (OECD Guideline 203, static)

Aquatic invertebrates

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EC50 (24 h) > 1,000 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

Aquatic plants

EC0 (72 h) 1,640 mg/l (growth rate), Scenedesmus subspicatus (OECD Guideline 201, static)

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

OECD Guideline 209 aquaticaerobic bacteria from a domestic water treatment plant/EC50 (3 h): > 100 mg/l

Persistence and degradability

Assessment biodegradation and elimination (H₂O) Poorly biodegradable. The product is unstable in water. The elimination data also refer to products of hydrolysis.

Elimination information

0 % BOD of the ThOD (28 d) (OECD Guideline 302 C) (aerobic, activated sludge) Poorly biodegradable.

Assessment of stability in water

In contact with water the substance will hydrolyse slowly.

Information on Stability in Water (Hydrolysis)

t_{1/2} 20 h (25 °C)

Bioaccumulative potential

Assessment bioaccumulation potential

Significant accumulation in organisms is not to be expected.

Bioaccumulation potential

Bioconcentration factor: 200 (28 d), Cyprinus carpio (OECD Guideline 305 E)

Mobility in soil

Assessment transport between environmental compartments.

The substance will not evaporate into the atmosphere from the water surface. Adsorption to solid soil phase is not expected.

Section 13 - DISPOSAL CONSIDERATIONS

Waste disposal of substance:

Incinerate or dispose of in a licensed facility. Do not discharge substance/product into sewer system.

Container disposal:

DRUMS:

Steel drums must be emptied and can be sent to a licensed drum reconditioner for reuse, a scrap metal dealer or an approved landfill. Do not attempt to refill or clean containers since residue is difficult to

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remove. Under no circumstances should empty drums be burned or cut open with gas or electric torch as toxic decomposition products may be liberated. Do not reuse empty containers.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

Not classified as a dangerous good under transport regulations

Sea transport IMDG

Not classified as a dangerous good under transport regulations

Air transportation IATA/ICAO

Not classified as a dangerous good under transport regulations

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

Registration status:

Chemical TSCA, US released / listed.

EPCRA 311/312 (Hazard categories)

Acute;Chronic

EPCRA SECTION 313 SUPPLIER NOTIFICATION

Chemical Name	CAS
Diphenylmethane-4,4'-diisocyanate (MDI)	101-68-8
P-MDI	9016-87-9

CERCLA-RQ (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

Chemical Name	CAS	CERCLA RQ
Diphenylmethane-4,4'-diisocyanate (MDI);	101-68-8	5000 lbs
P-MDI	9016-87-9	5,000 lbs

Reportable Quantity for release: 13,157.9 lb

STATE REGULATIONS

Chemical Name	CAS	State RTK
Diphenylmethane-4,4'-diisocyanate (MDI);	101-68-8	MA, NJ, PA
P-MDI	9016-87-9	MA, NJ, PA
Methylenediphenyl diisocyanate	26447-40-5	NJ

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Product #: 310150A

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 2 Fire: 1 Physical Hazard: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 2 Fire: 1 Reactivity: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

Revision Date: June 1, 2018

Revision Note: General Update

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition



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that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

FAST Dual Cartridge Adhesive Part B

Synonyms

Urethane System Resin Component

Chemical Family

Resin

Product Use

Membrane and Insulation Adhesive

Restrictions on Use

For industrial use only.

Manufacturer Information

Carlisle SynTec

1285 Ritner Highway

Carlisle, PA 17013

USA

Phone: +1-800-479-6832

Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200**Classification of the product**

No need for classification according to GHS criteria for this product.

Label elements

The product does not require a hazard warning label in accordance with GHS criteria.

Hazards not otherwise classified

No specific dangers known, if the regulations/notes for storage and handling are considered.

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200**Emergency overview**

CAUTION:

MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200
This product does not contain any components classified as hazardous under the referenced regulation.

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

CAS	Component Name	Percent
Trade Secret	Polyol	< 70.0
13674-84-5	tris(2-chloro-1-methylethyl)phosphate	< 30.0
Trade Secret	Catalyst	< 2.0
Trade Secret	Surfactant	< 1.0

The product contains:

CAS Number	Content (W/W)	Chemical name
13674-84-5	>= 20.0 - < 30.0 %	tris(2-chloro-1-methylethyl)phosphate

Section 4 - FIRST AID MEASURES

General advice:

Remove contaminated clothing.

Inhalation

Keep patient calm, remove to fresh air.

Skin

Wash thoroughly with soap and water.

Eyes

Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Ingestion

Rinse mouth and then drink plenty of water. Do not induce vomiting..

Most Important Symptoms/Effects

Information on: tris(2-chloro-1-methylethyl)phosphate

Symptoms: Overexposure may cause:, convulsions, depression, hypoxemia, tremors

Indication of any immediate medical attention and special treatment needed

Material Name: FAST Dual Cartridge Adhesive Part B

Product #: 310150B

Note to physician

Treatment: Symptomatic treatment (decontamination, vital functions).

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Water spray, dry powder, carbon dioxide, foam

Special Hazards Arising from the Chemical

Hazards during fire-fighting:

No particular hazards known.

Hazardous Combustion Products

Oxides of carbon, oxides of nitrogen

Advice for firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up

Spills should be contained, solidified, and placed in suitable containers for disposal.

Environmental Precautions

Do not empty into drains. Do not discharge into the subsoil/soil.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Ensure thorough ventilation of stores and work areas. Protect against moisture.

Protection against fire and explosion:

No explosion proofing necessary.

Conditions for Safe Storage, Including any Incompatibilities

Material Name: FAST Dual Cartridge Adhesive Part B

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Segregate from foods and animal feeds. Segregate from acids. Segregate from oxidants. Suitable materials for containers: Carbon steel (Iron), High density polyethylene (HDPE), Low density polyethylene (LDPE), Stainless steel 1.4301 (V2)

Further information on storage conditions: No special precautions necessary. Avoid extreme heat.

Store protected against freezing

Storage stability:

Storage temperature: 60 - 80 °F. Protect against moisture.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Advice on system design:

Provide local exhaust ventilation to control vapors/mists.

Eye/face protection:

Wear face shield or tightly fitting safety goggles (chemical goggles) if splashing hazard exists.

Skin Protection:

Wear work clothes with long sleeves. Wear protective shoes.

Respiratory Protection:

Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator as needed.

Hand protection:

Chemical resistant protective gloves.

Body protection:

Standard work clothes and shoes.

General safety and hygiene measures:

Avoid contact with skin. Handle in accordance with good industrial hygiene and safety practice. Wear protective clothing as necessary to prevent contact. Avoid inhalation of vapours/mists. Wash soiled clothing immediately.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	light yellow liquid	Physical State	liquid
Odor	musty	Color	Clear to light yellow
Odor Threshold	Not available	pH	>= 7
Freezing point	Not available	Evaporation Rate	3.8
Boiling Point	148.8 °C (> 300°F)	Flammability (solid, gas)	Not flammable
Autoignition	>250 °C (482°F)	Flash Point	Approx. >93°C (200°F)
Density (20 °C)	Approx. 1.1 g/cm ³	Decomposition	Not available
Self Igniting	Not self igniting	Vapor Pressure(25 °C)	< 0.1 hPa

Material Name: FAST Dual Cartridge Adhesive Part B

Product #: 310150B

Vapor Density (air=1)	N/A	Specific Gravity (water=1)	Not available
Water Solubility	Miscible	Partition coefficient: n-octanol/water	Not available

Other Information

No additional information available.

Section 10 - STABILITY AND REACTIVITY

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals: No corrosive effect on metal.

Oxidizing properties: Not fire-propagating

Chemical Stability

Stable under normal conditions of use.

Possibility of Hazardous Reactions

No hazardous reactions if stored and handled as prescribed/indicated.

Conditions to Avoid

Temperature: < 0 degrees Celsius

Incompatible Materials

Acids, isocyanates, strong oxidizing agents

Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: carbon monoxide, carbon dioxide, nitrogen oxide, hydrogen cyanide

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

Section 11 - TOXICOLOGICAL INFORMATION

Primary Routes of Exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact.

Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute and Chronic Toxicity**Acute toxicity**

Assessment of acute toxicity: No known acute effects.

Assessment other acute effects

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Origin of data: expert judgement

Material Name: FAST Dual Cartridge Adhesive Part B

Product #: 310150B

Irritation / corrosion

Assessment of irritating effects: No irritation is expected under intended use and appropriate handling.

Sensitization

Assessment of sensitization: The chemical structure does not suggest a sensitizing effect.

Aspiration Hazard

No aspiration hazard expected.

Chronic Toxicity/Effects**Repeated dose toxicity**

Assessment of repeated dose toxicity: Repeated oral uptake of the substance did not cause substance-related effects. Repeated inhalative uptake of the substance did not cause substance-related effects. Repeated dermal uptake of the substance did not cause substance-related effects.

Genetic toxicity

Assessment of mutagenicity: The chemical structure does not suggest a specific alert for such an effect.

Carcinogenicity

Assessment of carcinogenicity: The chemical structure does not suggest a specific alert for such an effect.

Reproductive toxicity

Assessment of reproduction toxicity: The chemical structure does not suggest a specific alert for such an effect.

Teratogenicity

Assessment of teratogenicity: The chemical structure does not suggest a specific alert for such an effect.

Other Information

The product has not been tested. The statement has been derived from the properties of the individual components.

Symptoms of Exposure**Medical conditions aggravated by overexposure**

Data available do not indicate that there are medical conditions that are generally recognized as being aggravated by exposure to this substance/product.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity**Aquatic toxicity**

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. The product has not been tested. The statement has been derived from the properties of the individual components.

Component Analysis - Aquatic Toxicity

Material Name: FAST Dual Cartridge Adhesive Part B

Product #: 310150B

Persistence and Degradability

Assessment biodegradation and elimination (H₂O)
Poorly biodegradable.

Elimination information
Poorly biodegradable.

Bioaccumulative Potential

Does not significantly accumulate in organisms..

Mobility in soil

Assessment transport between environmental compartments
Adsorption to solid soil phase is not expected.

Additional information

Adsorbable organically-bound halogen (AOX):
This product contains no organically-bound halogen.

Other ecotoxicological advice:

The product has not been tested. Do not discharge product into the environment without control.

Section 13 - DISPOSAL CONSIDERATIONS

Waste disposal of substance:

Incinerate in a licensed facility. Dispose of in a licensed facility. Do not discharge substance/product into sewer system.

Container disposal:

Steel drums must be emptied and can be sent to a licensed drum reconditioner for reuse, a scrap metal dealer or an approved landfill. Do not attempt to refill or clean containers since residue is difficult to remove. Under no circumstances should empty drums be burned or cut open with gas or electric torch as toxic decomposition products may be liberated. Do not reuse empty containers.

Section 14 - TRANSPORT INFORMATION

Land transport US DOT Information:

Not classified as a dangerous good under transport regulations

Air transport IATA/CAO Information:

Not classified as a dangerous good under transport regulations

Sea transport IMDG Information:

Not classified as a dangerous good under transport regulations

Section 15 - REGULATORY INFORMATION

Federal Regulations



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Material Name: FAST Dual Cartridge Adhesive Part B

Product #: 310150B

Registration status:

Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Not hazardous;

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 1 Fire: 1 Physical Hazard: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 1 Fire: 1 Reactivity: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

Revision Date: June 1, 2018

Revision Note: General Update

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use



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thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use

Material Name: Flexible FAST Part A

Product #: 317329 – 15 gal
310472 – 50 gal

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name: Flexible FAST Part A

Synonym: Diphenylmethane Diisocyanate

Chemical Family: Aromatic isocyanates

Product Use: Two-part adhesive for roofing systems

Restrictions on Use: For industrial use only.

Manufacturer Information

Carlisle SynTec

1285 Ritner Highway

Carlisle, PA 17013

USA

Phone: +1-800-479-6832

Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Acute Toxicity- Category 4 (Inhalation- mist)

Skin Corrosive/Irritation - Category 2

Eye Damage/Irritation - Category 2B

Specific Target Organ Toxicity - Single Exposure –(Irritating to respiratory system)-Category 3

Specific Target Organ Toxicity - Repeated Exposure –(by inhalation)-Category 2

Skin Sensitivity - Category 1B

Respiratory Sensitization- Category 1

Carcinogenicity-Category 2

GHS Label Elements

Symbol(s)



Signal Word

Danger

Hazard Statement:

H320 Causes eye irritation.

H315 Causes skin irritation.

H332 Harmful if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

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H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs (Olfactory organs) through prolonged or repeated exposure (inhalation).

Precautionary Statements (Prevention):

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P271 Use only outdoors or in a well-ventilated area.
P260 Do not breathe dust/gas/mist/vapours.
P201 Obtain special instructions before use.
P261 Avoid breathing mist.
P202 Do not handle until all safety precautions have been read and understood.
P284 [In case of inadequate ventilation] wear respiratory protection.
P272 Contaminated work clothing should not be allowed out of the workplace.
P264 Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308 + P311 IF exposed or concerned: Call a POISON CENTER or doctor/physician.
P314 Get medical advice/attention if you feel unwell.
P303 + P352 IF ON SKIN (or hair): Wash with plenty of soap and water.
P333 + P311 If skin irritation or rash occurs: Call a POISON CENTER or doctor/physician.
P362 + P364 Take off contaminated clothing and wash before reuse.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P337 + P311 If eye irritation persists: Call a POISON CENTER or doctor/physician.

Precautionary Statements (Storage):

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Precautionary Statements (Disposal):

P501 Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified

No specific dangers known, if the regulations/notes for storage and handling are considered.

Labeling of special preparations (GHS):

CONTAINS ISOCYANATES. INHALATION OF ISOCYANATE MISTS OR VAPORS MAY CAUSE RESPIRATORY IRRITATION, BREATHELESSNESS, CHEST DISCOMFORT AND REDUCED PULMONARY FUNCTION. OVEREXPOSURE WELL ABOVE THE PEL MAY RESULT IN BRONCHITIS, BRONCHIAL SPASMS AND PULMONARY EDEMA. LONG-TERM EXPOSURE TO ISOCYANATES HAS BEEN REPORTED TO CAUSE LUNG DAMAGE, INCLUDING REDUCED LUNG FUNCTION WHICH MAY BE PERMANENT. ACUTE OR CHRONIC OVEREXPOSURE TO ISOCYANATES MAY CAUSE SENSITIZATION IN SOME INDIVIDUALS, RESULTING IN ALLERGIC RESPIRATORY REACTIONS INCLUDING WHEEZING,

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SHORTNESS OF BREATH AND DIFFICULTY BREATHING. ANIMAL TESTS INDICATE THAT SKIN CONTACT MAY PLAY A ROLE IN CAUSING RESPIRATORY SENSITIZATION.

**According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200
Emergency overview**

WARNING:

CONTAINS ISOCYANATES. INHALATION OF ISOCYANATE MISTS OR VAPORS MAY CAUSE RESPIRATORY IRRITATION, BREATHLESSNESS, CHEST DISCOMFORT AND REDUCED PULMONARY FUNCTION. OVEREXPOSURE WELL ABOVE THE PEL MAY RESULT IN BRONCHITIS, BRONCHIAL SPASMS AND PULMONARY EDEMA. LONG-TERM EXPOSURE TO ISOCYANATES HAS BEEN REPORTED TO CAUSE LUNG DAMAGE, INCLUDING REDUCED LUNG FUNCTION WHICH MAY BE PERMANENT. ACUTE OR CHRONIC OVEREXPOSURE TO ISOCYANATES MAY CAUSE SENSITIZATION IN SOME INDIVIDUALS, RESULTING IN ALLERGIC RESPIRATORY REACTIONS INCLUDING WHEEZING, SHORTNESS OF BREATH AND DIFFICULTY BREATHING. ANIMAL TESTS INDICATE THAT SKIN CONTACT MAY PLAY A ROLE IN CAUSING RESPIRATORY SENSITIZATION. AVOID CONTACT WITH SKIN AND EYES. SKIN OR EYE CONTACT MAY CAUSE IRRITATION.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
101-68-8	Diphenylmethane-4,4'-diisocyanate (MDI)	25.0 - 60.0
25686-28-6	4,4'-Methylenediphenyl diisocyanate, oligomers	3.0 – 7.0
26447-40-5	Methylenediphenyl diisocyanate	10.0 – 30.0
39420-98-9	Isocyanates, reaction product of polyol with methylenediphenyl diisocyanate	10.0 - 30.0
9016-87-9	P-MDI	7.0 – 13.0
39310-05-9	Diphenylmethane diisocyanate, homopolymer	10.0 – 30.0
5873-54-1	Diphenylmethane-2,4'- diisocyanate	10.0 – 30.0

Section 4 - FIRST AID MEASURES

General advice: Remove contaminated clothing.

EYES: In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Immediate medical attention required.

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SKIN: Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

INGESTION: Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required

INHALATION: Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Eye irritation, skin irritation, allergic symptoms

Hazards: Symptoms can appear later.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Hazards: Respiratory sensitization may result in allergic (asthma-like) signs in the lower respiratory tract including wheezing, shortness of breath and difficulty breathing, the onset of which may be delayed. Repeated inhalation of high concentrations may cause lung damage, including reduced lung function, which may be permanent. Substances eliciting lower respiratory tract irritation may worsen the asthma-like reactions that may be produced by product exposures.

Indication of any immediate medical attention and special treatment needed

Note to physician

Antidote: Specific antidotes or neutralizers to isocyanates do not exist.

Treatment: Treatment should be supportive and based on the judgement of the physician in response to the reaction of the patient.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Dry powder, foam, carbon dioxide, water spray.

Special hazards arising from the substance or mixture

Hazards during fire-fighting: nitrous gases, fumes/smoke, isocyanate, vapor

Fire Fighting Measures

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

Keep containers cool by spraying with water if exposed to fire. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Clear area. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

Environmental precautions

Do not discharge into drains/surface waters/groundwater.

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Methods and material for containment and cleaning up

For small amounts: Absorb isocyanate with suitable absorbent material (see § 40 CFR, sections 260, 264 and 265 for further information). Shovel into open container. Do not make container pressure tight. Move container to a well-ventilated area (outside). Spill area can be decontaminated with the following recommended decontamination solution: Mixture of 90 % water, 8 % concentrated ammonia, 2 % detergent. Add at a 10 to 1 ratio. Allow to stand for at least 48 hours to allow escape of evolved carbon dioxide.

For large amounts: If temporary control of isocyanate vapor is required, a blanket of protein foam or other suitable foam (available from most fire departments) may be placed over the spill. Transfer as much liquid as possible via pump or vacuum device into closed but not sealed containers for disposal.

For residues: The following measures should be taken for final cleanup: Wash down spill area with decontamination solution. Allow solution to stand for at least 10 minutes.

Dike spillage.

Section 7 - HANDLING AND STORAGE

Precautions for safe handling

Provide suitable exhaust ventilation at the processing machines. Ensure thorough ventilation of stores and work areas. Avoid aerosol formation. When handling heated product, vapours of the product should be ventilated, and respiratory protection used. Wear respiratory protection when spraying. Danger of bursting when sealed gastight. Protect against moisture. If bulging of drum occurs, transfer to well ventilated area, puncture to relieve pressure, open vent and let stand for 48 hours before resealing.

Protection against fire and explosion:

Storage No explosion proofing necessary.

Conditions for safe storage, including any incompatibilities

Keep away from water. Segregate from foods and animal feeds. Segregate from acids and bases.

Suitable materials for containers: Carbon steel (Iron), High density polyethylene (HDPE), Low density polyethylene (LDPE), Stainless steel 1.4301 (V2)

Further information on storage conditions: Formation of CO₂ and build up of pressure possible. Keep container tightly closed and in a well-ventilated place. Outage of containers should be filled with dry inert gas at atmospheric pressure to avoid reaction with moisture.

Storage stability:

Storage temperature: 16 - 27 °C (60 - 80°F)

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Diphenylmethane-4,4'-	101-68-8
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diisocyanate (MDI)	
OSHA PEL	CLV 0.02 ppm 0.2 mg/m ³
ACGIH TLV	TWA value 0.005 ppm
P-MDI	9016-87-9
OSHA PEL	CLV 0.02 ppm 0.2 mg/m ³
ACGIH TVL	TWA value 0.005 ppm

Advice on system design:

Provide local exhaust ventilation to maintain recommended P.E.L.

Personal protective equipment

Respiratory protection:

When workers are facing concentrations above the occupational exposure limits they must use appropriate certified respirators. When atmospheric levels may exceed the occupational exposure limit (PEL or TLV) NIOSH-certified air-purifying respirators equipped with an organic vapor sorbent and particulate filter can be used as long as appropriate precautions and change out schedules are in place. For emergency or non-routine, high exposure situations, including confined space entry, use a NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:

Chemical resistant protective gloves should be worn to prevent all skin contact., Suitable materials may include, chloroprene rubber (Neoprene), nitrile rubber (Buna N), chlorinated polyethylene, polyvinylchloride (Pylox), butyl rubber, depending upon conditions of use.

Eye protection:

Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:

Cover as much of the exposed skin as possible to prevent all skin contact., Suitable materials may include, saran-coated material, depending upon conditions of use.

General safety and hygiene measures:

Wear protective clothing as necessary to prevent contact. Eye wash fountains and safety showers must be easily accessible. Observe the appropriate PEL or TLV value. Wash soiled clothing immediately. Contaminated equipment or clothing should be cleaned after each use or disposed of.

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Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	liquid	Physical State	liquid
Odor	faint aromatic	Color	Light yellow to amber
Boiling Point (@ 5mmHg)	200°C (392°F)	Flammability Limit	Not flammable
Freezing Point	< -20.0°C (-4°F)	Vapor Pressure (25°C)	0.00001 mmHg
Autoignition	>470°C (878°F)	Flash Point	200°C (392°F)
Solubility in water	Reacts with water	Viscosity, Dynamic (25°C)	270 mPa.s
Vapor Density	N/A	Miscibility with water:	Reacts with water.
Density (25°C)	9.66 lb/USg	pH	N/A
Relative Density	N/A	Vapor Density	N/A
Thermal decomposition	No decomposition if stored and handled as prescribed.	Self-ignition temperature:	Based on its structural properties the product is not classified as self-igniting.
Partitioning coefficient noctanol/ water (log Pow):	N/A		

Other Information: If necessary, information on other physical and chemical parameters is indicated in this section

Section 10 - STABILITY AND REACTIVITY

Reactivity

Corrosion to metals: No corrosive effect on metal.

Oxidizing properties: Not an oxidizer

Chemical Stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of Hazardous Reactions

Reacts with water, with formation of carbon dioxide. Risk of bursting. Reacts with alcohols. Reacts with acids. Reacts with alkalies. Reacts with amines. Risk of exothermic reaction. Risk of polymerization.

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Contact with certain rubbers and plastics can cause brittleness of the substance/product with subsequent loss in strength.

Conditions to Avoid

Avoid moisture.

Incompatible Materials

Acids, amines, alcohols, water, Alkalines, strong bases, Substances/products that react with isocyanates

Hazardous decomposition products: carbon monoxide, carbon dioxide, nitrogen oxide, hydrogen cyanide, nitrogen oxides, aromatic isocyanates, gases/vapors

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Inhalation of vapors may cause irritation of the mucous membranes of the nose, throat or trachea, breathlessness, chest discomfort, difficult breathing and reduced pulmonary function. Inhalation exposure well above the PEL may result additionally in eye irritation, headache, chemical bronchitis, asthma-like findings or pulmonary edema. Isocyanates have also been reported to cause hypersensitivity pneumonitis, which is characterized by flu-like symptoms, the onset of which may be delayed.

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Diphenylmethane-4,4'-diisocyanate (MDI) (101-68-8)

Oral LD50 Rat >10,000 mg/kg (Directive 84/449/EEC, B.1)

Dermal LD50 Rabbit >9,400 mg/kg

Inhalation LC50 Rat 0.49 mg/l (OECD Guideline 403)

An aerosol was tested

Isocyanates, reaction product of polyol with methylenediphenyl diisocyanate (39420-98-9)

Oral LD50 Rat >10,000 mg/kg (Directive 84/449/EEC, B.1)

Dermal LD50 Rabbit >9,400 mg/kg

Inhalation LC50 Rat 0.49 mg/l (OECD Guideline 403)

Interaperitoneal LD50 Rabbit 100mg/kg

Diphenylmethane diisocyanate, homopolymer (39310-05-9)

Oral LD50 Rat >5,000 mg/kg (up and down procedure)

Dermal LD50 Rabbit >9,400 mg/kg

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Inhalation LC50 Rat 0.49 mg/l (OECD Guideline 403)
Diphenylmethane-2,4'-diisocyanate (5873-54-1)
Dermal LD50 Rabbit >9,400 mg/kg
Inhalation LD50 Rat 0.49 mg/l (OECD Guideline 403)
Interaperitoneal LD50 Rabbit 100mg/kg

Assessment other acute effects

Assessment of STOT single: Category 3
Causes temporary irritation of the respiratory tract.

Irritation / corrosion

Assessment of irritating effects: Irritating to eyes, respiratory system and skin. Skin contact may result in dermatitis, either irritative or allergic.

Skin

Information on: Diphenylmethane-4,4'-diisocyanate (MDI); Isocyanates, reaction product of polyol with methylenediphenyl diisocyanate; Diphenylmethane diisocyanate, homopolymer; Diphenylmethane-2,4'-diisocyanate
Species: rabbit
Result: Irritating.
Method: Draize test

Eye

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)
Species: rabbit
Result: Irritating.
Method: Draize test

Sensitization

Assessment of sensitization: Sensitization after skin contact possible. The substance may cause sensitization of the respiratory tract. As a result of previous repeated overexposures or a single large dose, certain individuals will develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the PEL/TLV. These symptoms, which include chest tightness, wheezing, cough, shortness of breath, or asthmatic attack, could be immediate or delayed up to several hours after exposure. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air, or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Chronic overexposure to isocyanates has also been reported to cause lung damage, including a decrease in lung function, which may be permanent. Prolonged contact can cause reddening, swelling, rash, scaling, or blistering. In those who have developed a skin sensitization, these symptoms can develop as a result of contact with very small amounts of liquid material, or even as a result of vapour-only exposure. Animal tests indicate that skin contact may play a role in causing respiratory sensitization.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI); Isocyanates, reaction product of polyol with methylenediphenyl diisocyanate; Diphenylmethane diisocyanate, homopolymer; Diphenylmethane-2,4'-diisocyanate

Safety Data Sheet

Material Name: Flexible FAST Part A

**Product #: 317329 – 15 gal
310472 – 50 gal**

Buehler test
Species: guinea pig
Result: sensitizing

Mouse Local Lymph Node Assay (LLNA)
Species: mouse
Result: sensitizin
Can cause skin sensitization

other
Species: guinea pig
Result: sensitizing
Studies in animals suggest that dermal exposure may lead to pulmonary sensitization. However, the relevance of this result for humans is unclear.

Aspiration Hazard
No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: The substance may cause damage to the olfactory epithelium after repeated inhalation. The substance may cause damage to the lung after repeated inhalation. These effects are not relevant to humans at occupational levels of exposure.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Experimental/calculated data: rat (Wistar) (male/female) Inhalation 2 yrs, 6 hr/day 0, 0.2, 1, 6 mg/m³, olfactory epithelium

NOAEL: 0.2 mg/m³

LOAEL: 1 mg/m³

The substance may cause damage to the olfactory epithelium after repeated inhalation. These effects are not relevant to humans at occupational levels of exposure. Repeated inhalative uptake of the substance did not cause damage to the reproductive organs.

Genetic toxicity

Assessment of mutagenicity: The substance was mutagenic in various bacterial test systems; however, these results could not be confirmed in tests with mammals.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Genetic toxicity in vitro: OECD Guideline 471 Ames-test Salmonella typhimurium:with and without metabolic activation ambiguous

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Genetic toxicity in vivo: OECD Guideline 474 Micronucleus assay rat (male) Inhalation negative.
No clastogenic effect reported.

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Carcinogenicity

Assessment of carcinogenicity: A carcinogenic potential cannot be excluded after prolonged exposure to severely irritating concentrations. These effects are not relevant to humans at occupational levels of exposure.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI); Isocyanates, reaction product of polyol with methylenediphenyl diisocyanate; Diphenylmethane-2,4'-diisocyanate

Experimental/calculated data: OECD Guideline 453 rat Inhalation 0, 0.2, 1, 6 mg/m³

Result: Positive/Lung tumors

Carcinogenetic class: Diphenylmethane-4,4'-diisocyanate (MDI) – IARC 3

Reproductive toxicity

Assessment of reproduction toxicity: Repeated inhalative uptake of the substance did not cause damage to the reproductive organs.

Teratogenicity

Assessment of teratogenicity: The substance did not cause malformations in animal studies; however, toxicity to development was observed at high doses that were toxic to the parental animals.

Development

OECD Guideline 414 rat Inhalation 0, 1, 4, 12 mg/m³

NOAEL Mat.: 4 mg/m³

NOAEL Teratog.: 4 mg/m³

The substance did not cause malformations in animal studies; however, toxicity to development was observed at high doses that were toxic to the parental animals.

Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Eye irritation, skin irritation, allergic symptoms

Medical conditions aggravated by overexposure

The isocyanate component is a respiratory sensitizer. It may cause allergic reaction leading to asthma-like spasms of the bronchial tubes and difficulty in breathing. Medical supervision of all employees who handle or come into contact with isocyanates is recommended. Contact may aggravate pulmonary disorders. Persons with history of respiratory disease or hypersensitivity should not be exposed to this product. Preemployment and periodic medical examinations with respiratory function tests (FEV₁, FVC as a minimum) are suggested. Persons with asthmatic conditions, chronic bronchitis, other chronic respiratory diseases, recurrent eczema or pulmonary sensitization should be excluded from working with isocyanates. Once a person is diagnosed as having pulmonary sensitization (allergic asthma) to isocyanates, further exposure is not recommended.

Potential Acute effects:

Eye contact: Causes eye irritation

Inhalation: Harmful if inhaled. May cause respiratory irritation. This product is a respiratory irritant and potential respiratory sensitizer: repeated inhalation of vapour or aerosol at levels above the occupational exposure limit could cause respiratory sensitization. Symptoms may include irritation to the eyes, nose, throat and lungs, possibly combined with dryness of the throat, tightness of chest and

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difficulty in breathing. The onset of the respiratory symptoms may be delayed for several hours after exposure. A hyper-reactive response to even minimal concentrations of MDI may develop in sensitised persons. LC50 (rat) : ca. 490 mg/m³ (4 hours) : using experimentally produced respirable aerosol having aerodynamic diameter <5microns.

Skin contact: Causes skin irritation. May cause sensitization by skin contact. Animal studies have shown that respiratory sensitisation can be induced by skin contact with known respiratory sensitisers including diisocyanates. These results emphasize the need for protective clothing including gloves to be worn at all times when handling these chemicals or in maintenance work.

Ingestion: Low oral toxicity, but ingestion may cause irritation of the gastrointestinal tract

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

Diphenylmethane 4,4'-diisocyanate	
Fish:	LC50 96 h Brachydanio rerio >1000 mg/L [static]
Invertebrate:	EC50 24 hr Daphnia magna >1000 mg/L[static] NOEC 21 days Daphnia magna >10 mg/L[semi-static]
Algae:	NOEC 72 h Algae 1640 mg/L IUCLID
Isocyanates, reaction product of polyol with methylenediphenyl diisocyanate	
Fish:	LC50 96 h Brachydanio rerio >1000 mg/L [static]
Invertebrate:	EC50 24 hr Daphnia magna >1000 mg/L[static] NOEC 21 days Daphnia magna >10 mg/L[semi-static]
Bacteria:	EC50 3 hr bacteria >100 mg/L[static]
Diphenylmethane diisocyanate, homopolymer	
Fish:	LC50 96 h Brachydanio rerio >1000 mg/L [static]
Invertebrate:	EC50 24 hr Daphnia magna >1000 mg/L[static] NOEC 21 days Daphnia magna >10 mg/L[semi-static]

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Bacteria:	EC50 3 hr bacteria >100 mg/L[static]
Algae:	EC50 72 h Algae >1640 mg/L IUCLID NOEC 72 h Algae 1640 mg/L IUCLID
Diphenylmethane-2,4'-diisocyanate	
Fish:	LC50 96 h Brachydanio rerio >1000 mg/L [static]
Invertebrate:	EC50 24 hr Daphnia magna >1000 mg/L[static] NOEC 21 days Daphnia magna >10 mg/L[semi-static]
Bacteria:	EC50 3 hr bacteria >100 mg/L[static]

Aquatic toxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. Based on long-term (chronic) toxicity study data, the product is very likely not harmful to aquatic organisms.

The product may hydrolyse. The test result maybe partially due to degradation products. The product has not been tested as a whole. The statement has been derived from substances/products of a similar structure or composition.

Persistence and degradability

Assessment biodegradation and elimination (H₂O): Poorly biodegradable. The product is unstable in water. The elimination data also refer to products of hydrolysis.

Elimination information:

0 % BOD of the ThOD (28 d) (OECD Guideline 302 C) (aerobic, activated sludge) Poorly biodegradable.

Assessment of stability in water

In contact with water the substance will hydrolyse slowly.

Information on Stability in Water (Hydrolysis)

t_{1/2} 20 h (25 °C)

Bioaccumulative potential

Assessment bioaccumulation potential

Significant accumulation in organisms is not to be expected.

Bioaccumulation potential

Bioconcentration factor: 200 (28 d), Cyprinus carpio (OECD Guideline 305 E)

Mobility in soil

Assessment transport between environmental compartments.

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The substance will not evaporate into the atmosphere from the water surface. Adsorption to solid soil phase is not expected.

Section 13 - DISPOSAL CONSIDERATIONS

Waste disposal of substance:

Incinerate or dispose of in a licensed facility. Do not discharge substance/product into sewer system.

Container disposal:

DRUMS:

Steel drums must be emptied and can be sent to a licensed drum reconditioner for reuse, a scrap metal dealer or an approved landfill. Do not attempt to refill or clean containers since residue is difficult to remove. Under no circumstances should empty drums be burned or cut open with gas or electric torch as toxic decomposition products may be liberated. Do not reuse empty containers.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

Not classified as a dangerous good under transport regulations

Sea transport IMDG

Not classified as a dangerous good under transport regulations

Air transportation IATA/ICAO

Not classified as a dangerous good under transport regulations

Further information

DOT: This product is regulated if the amount in a single receptacle exceeds the Reportable Quantity (RQ). Please refer to Section 15 of this MSDS for the RQ for this product.

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

Registration status:

Chemical TSCA, US released / listed.

EPCRA 311/312 (Hazard categories) Acute;Chronic

EPCRA SECTION 313 SUPPLIER NOTIFICATION

Chemical Name	CAS
Diphenylmethane-4,4'-diisocyanate (MDI)	101-68-8
P-MDI	9016-87-9



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CERCLA-RQ (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

Chemical Name	CAS	CERCLA RQ
Diphenylmethane-4,4'-diisocyanate (MDI);	101-68-8	5000 lbs
P-MDI	9016-87-9	5,000 lbs

Reportable Quantity for release: 13,157.9 lb

STATE REGULATIONS

Chemical Name	CAS	State RTK
Diphenylmethane-4,4'-diisocyanate (MDI);	101-68-8	MA, NJ, PA
P-MDI	9016-87-9	MA, NJ, PA
Methylenediphenyl diisocyanate	26447-40-5	NJ

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 2 Fire: 1 Physical Hazard: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 2 Fire: 1 Reactivity: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

New SDS: April 17, 2015

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.



Safety Data Sheet

Material Name: Flexible FAST Part A

**Product #: 317329 – 15 gal
310472 – 50 gal**

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name: Flexible FAST Adhesive Part B

Synonyms: Polyol Blend.

Chemical Family: Polyol Blend

Product Use: Commercial Roofing Adhesive

Restrictions on Use: Professional use only

Manufacturer Information

Carlisle SynTec

1285 Ritner Highway

Carlisle, PA 17013

USA

Phone: +1-800-479-6832

Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

None needed according to classification criteria

GHS Label Elements

Symbol(s)

None needed according to classification criteria

Signal Word

None needed according to classification criteria

Hazard Statement(s)

None needed according to classification criteria

Precautionary Statement(s)

Prevention

None needed according to classification criteria

Response

None needed according to classification criteria

Storage

None needed according to classification criteria

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

Other Hazards

No additional information available.

Safety Data Sheet

Material Name: Flexible FAST Adhesive Part B

Product # 310473,317331

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
25265-71-8	Dipropylene glycol	5-10
13674-84-5	2-Propanol, 1-chloro-, phosphate (3:1)	10-20
280-57-9	1,4-Diazabicyclo[2.2.2]octane	0.1-1
108-01-0	2-(Dimethylamino)ethanol	0.1-1

Section 4 - FIRST AID MEASURES

Description of Necessary Measures

IF exposed or concerned: Get medical advice/attention.

Inhalation

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician.

Skin

Wash with plenty of soap and water. If skin irritation occurs, get medical advice/attention.

Eyes

Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Ingestion

Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Most Important Symptoms/Effects

Acute

No information on significant adverse effects.

Delayed

No information on significant adverse effects.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

regular dry chemical, carbon dioxide, water, regular foam

Unsuitable Extinguishing Media

None known.

Special Hazards Arising from the Chemical

Closed containers may rupture violently when heated.

Hazardous Combustion Products

Oxides of carbon, oxides of phosphorus, hydrogen halides

Special Protective Equipment and Precautions for Firefighters

Wear self-contained breathing apparatus with a full facepiece and protective clothing.

Fire Fighting Measures

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up

Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering. Do not touch or walk through spilled material. Stop leak if possible without personal risk. Small spills: Absorb with earth, sand or other non-combustible material and transfer to container. Large spills: Dike for later disposal. Eliminate all sources of ignition. Do not flush into sanitary sewer systems, drains or surface water.

Environmental Precautions

Avoid release to the environment.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Do not eat, drink, or smoke when using this product. Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Use only in well ventilated areas. Wear protective gloves/clothing and eye/face protection. Wash contaminated clothing before reuse.

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Product # 310473,317331

Conditions for Safe Storage, Including any Incompatibilities

None needed according to classification criteria

Store between 65°F-85°F (18°C-30°C). Store in a dry place. Keep away from incompatible materials.

Incompatible Materials

Strong oxidizing materials, isocyanates, strong acids, strong bases

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

ACGIH, NIOSH, EU, OSHA (US) and Mexico have not developed exposure limits for any of this product's components

Biological limit value

There are no biological limit values for any of this product's components.

Engineering Controls

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin Protection

Wear chemical resistant clothing and rubber boots when potential for contact with the material exists. Thoroughly clean and dry contaminated clothing and shoes before reuse.

Respiratory Protection

In case of inadequate ventilation wear respiratory protection.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	light yellow liquid	Physical State	liquid
Odor	musty, amine	Color	light yellow
Odor Threshold	Not available	pH	Not available
Melting Point	Not available	Boiling Point	>100 °C
Freezing point	Not available	Evaporation Rate	slower than ether
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	Not available	Flash Point	>201 °F [(CC)]

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Product # 310473,317331

Lower Explosive Limit	Not available	Decomposition	Not available
Upper Explosive Limit	Not available	Vapor Pressure	Not available
Vapor Density (air=1)	>1	Specific Gravity (water=1)	1.1058
Water Solubility	soluble	Partition coefficient: n-octanol/water	Not available
Viscosity	250 cps	Solubility (Other)	Not available
Density	9.23 lb/gal at @ 25°C	Physical Form	liquid
VOC	0 g/l		

Other Information

No additional information available.

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable at normal temperatures and pressure.

Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Prolonged heating above 160°C or storage below 5°C. Avoid heat, flames, sparks and other sources of ignition.

Incompatible Materials

Strong acids, strong bases, strong oxidizing materials, isocyanates

Hazardous decomposition products

Oxides of hydrogen, oxides of phosphorus, hydrogen halides

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

Vapor or mist may cause respiratory tract irritation.

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Material Name: Flexible FAST Adhesive Part B

Product # 310473,317331

Skin Contact

May cause mild skin irritation.

Eye Contact

May cause mild eye irritation.

Ingestion

May cause gastrointestinal disturbances, nausea, vomiting, and diarrhea.

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Dipropylene glycol (25265-71-8)

Oral LD50 Rat 14800 mg/kg

Dermal LD50 Rabbit >5000 mg/kg

2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)

Oral LD50 Rat 630 mg/kg

Dermal LD50 Rabbit >2000 mg/kg

Inhalation LC50 Rat >7 mg/L 4 h

1,4-Diazabicyclo[2.2.2]octane (280-57-9)

Oral LD50 Rat 1700 mg/kg

Dermal LD50 Rabbit 3200 mg/kg

2-(Dimethylamino)ethanol (108-01-0)

Oral LD50 Rat 1803 mg/kg

Dermal LD50 Rabbit 1220 mg/kg

Inhalation LC50 Rat 1641 ppm 4 h

Water (7732-18-5)

Oral LD50 Rat >90 mL/kg

Immediate Effects

No information on significant adverse effects.

Delayed Effects

No information on significant adverse effects.

Irritation/Corrosivity Data

May cause respiratory tract irritation, skin irritation, and eye irritation.

Respiratory Sensitization

No information available for the product.

Dermal Sensitization

No information available for the product.

Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, NTP, DFG or OSHA

Safety Data Sheet

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Germ Cell Mutagenicity

No information available for the product.

Reproductive Toxicity

No information available for the product.

Specific Target Organ Toxicity - Single Exposure

No target organs identified.

Specific Target Organ Toxicity - Repeated Exposure

No target organs identified.

Aspiration hazard

No information available for the product.

Medical Conditions Aggravated by Exposure

None reported.

Additional Data

No additional information available.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

Avoid release to the environment.

Component Analysis - Aquatic Toxicity

2-Propanol, 1-chloro-, phosphate (3:1)	13674-84-5
Fish:	LC50 96 h Brachydanio rerio 56.2 mg/L [static]; LC50 96 h Pimephales promelas 98 mg/L [static]; LC50 96 h Poecilia reticulata 30 mg/L [static]
Algae:	EC50 72 h Desmodesmus subspicatus 45 mg/L IUCLID; EC50 96 h Pseudokirchneriella subcapitata 4 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 63 mg/L IUCLID
1,4-Diazabicyclo[2.2.2]octane	280-57-9
Fish:	LC50 96 h Pimephales promelas 1510 - 1980 mg/L [flow-through]
2-(Dimethylamino)ethanol	108-01-0



Safety Data Sheet

Material Name: Flexible FAST Adhesive Part B

Product # 310473,317331

Fish:	LC50 96 h Pimephales promelas 81 mg/L [static]
Algae:	EC50 72 h Desmodesmus subspicatus 35 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 98.77 mg/L IUCLID

Persistence and Degradability

No information available for the product.

Bioaccumulative Potential

No information available for the product.

Mobility

No information available for the product.

Bioconcentration

No information available for the product.

Other Toxicity

No additional information available.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose in accordance with all applicable regulations.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

UN/NA #: Not regulated.

IATA Information:

No Classification assigned.

TDG Information:

UN#: Not regulated.

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: Yes Chronic Health: Yes Fire: No Pressure: No Reactivity: No



Safety Data Sheet

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U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Dipropylene glycol	25265-71-8	No	No	No	No	Yes
2-(Dimethylamino)ethanol	108-01-0	No	Yes	No	Yes	Yes

Not listed under California Proposition 65

Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

1,4-Diazabicyclo[2.2.2]octane	280-57-9
	1 %

WHMIS Classification

D2A, D2B.

Component Analysis - Inventory

Oxirane, methyl-, polymer with oxirane (9003-11-6)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

Dipropylene glycol (25265-71-8)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Siloxanes and Silicones, dimethyl, 3-hydroxypropyl methyl, ethoxylated propoxylated (68937-55-3)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

Safety Data Sheet

Material Name: Flexible FAST Adhesive Part B

Product # 310473,317331

Oxirane, methyl-, polymer with oxirane, mono-2-propenyl ether (9041-33-2)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

1,4-Diazabicyclo[2.2.2]octane (280-57-9)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

2-(Dimethylamino)ethanol (108-01-0)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Water (7732-18-5)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes

Section 16 - OTHER INFORMATION

NFPA Ratings

Health: 2 Fire: 1 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

New 3/24/2015

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil



Safety Data Sheet

Material Name: Flexible FAST Adhesive Part B

Product # 310473,317331

Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Safety Data Sheet

Material Name: Sure-Flex Reinforced KEE HP Membranes and Accessories

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

Sure-Flex Reinforced KEE HP Membranes and Accessories

Trade Names

Sure-Flex KEE HP, FleeceBACK KEE HP, FleeceBACK KEE HP FRS, Sure-Flex Non-Reinforced KEE HP Flashing, Sure-Flex KEE HP Coverstrip, Sure-Flex Inside/Outside/Universal/PreFab Corners, Sure-Flex Molded Pipe Seals, Sure-Flex Split Pipe Boot, Sure-Flex Square Tube Flashing, Sure-Flex T-Joint Covers

Product Use

Roof and Waterproofing Membranes and Accessories

Restrictions on Use

For industrial use only.

Manufacturer Information

Carlisle SynTec
1285 Ritner Highway
Carlisle, PA 17013 USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (Chemtrec)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

The products listed above are considered “articles” as defined in the OSHA Hazard Communication Standard, 29 CFR 1910.1200 and are considered “manufactured articles” as defined by the Canadian Hazardous Products Act (R.S.C., 1985, c. H-3) and as such are exempt from the requirement for an SDS . Under normal conditions of use, these products do not pose a hazard in the workplace or to the building occupants. Since these products or “articles” pose no health hazard under normal conditions of use, there is no requirement for an SDS. In addition, “articles” are not included in the scope of the Globally Harmonized System (GHS). For that reason, the GHS labeling elements are not included on this SDS. Although these products are not subject to the OSHA or Canadian standards or GHS labelling elements, Carlisle would like to disclose as much health and safety information as possible to ensure that these products are handled and used properly. This SDS contains information critical to the safe handling and proper use of the products. It is recommended that this SDS should be retained and made available to the users of these products. In addition, the recommendations for handling and use of these products should be included in worker training programs.

Safety Data Sheet

Material Name: Sure-Flex Reinforced KEE HP Membranes and Accessories

GHS Label Elements

Symbol(s)

None required

Signal Word

None required

Hazard Statement(s)

None required

Precautionary Statement(s)

Prevention

None required

Response

None required

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

Other Hazards

No additional information available.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
	Proprietary	100%

Section 4 - FIRST AID MEASURES

Description of Necessary Measures

None known.

Inhalation

Inhalation of vapors from these products during heat welding may cause respiratory tract irritation. If breathing becomes difficult, remove person from heat welding area to fresh air. Seek medical attention if irritation persists.

Skin

If skin irritation occurs, wash skin with soap and water. Seek medical attention if irritation persists.

Eyes

Vapor from this product during heat welding may irritate eyes. If eye irritation occurs, flush eyes with water for 15 minutes. Seek medical attention if irritation persists.

Safety Data Sheet

Material Name: Sure-Flex Reinforced KEE HP Membranes and Accessories

Ingestion

Cannot be ingested under normal circumstances.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Most Important Symptoms/Effects

Acute

None known

Delayed

None known

Note to Physicians

Nothing known to note

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Use dry chemical, carbon dioxide, or water spray.

Unsuitable Extinguishing Media

None reported.

Special Hazards Arising from the Product

None known.

Hazardous Combustion Products

Hazardous combustion products may include: Oxides of carbon, oxides of nitrogen, hydrocarbons, hydrochloric acid, acrylic acid, and other organic compounds

Advice for firefighters

Wear full protective fire fighting gear including a self-contained breathing apparatus (SCBA) to avoid inhalation of smoke and gases.

Fire Fighting Measures

Use standard procedures for Class A fires. Wear self-contained breathing apparatus (SCBA) and protective clothing for structural fire fighting.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up

Sweep up and dispose in accordance with all applicable regulations.

Environmental Precautions

Provide adequate ventilation during heat welding.

Safety Data Sheet

Material Name: Sure-Flex Reinforced KEE HP Membranes and Accessories

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Use protective equipment as described in Section 8 when handling products. Handle in accordance with good industrial hygiene and safety practices.

Conditions for Safe Storage, Including any Incompatibilities

Material should be kept dry, clean, and in original packaging.

Incompatible Materials

None known

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

No known exposure limits

Biological Limit Value

There are no biological limit values for any of these products' components.

Engineering Controls

Provide adequate ventilation when heat welding this product.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face Protection

Sunglasses which filter out ultraviolet light are strongly recommended since the white surface is highly reflective to sunlight

Skin Protection

Impervious gloves such as nitrile should be used to avoid excessive skin contact. Heavy cotton or insulated gloves and clothing should be used to handle hot plastic.

Respiratory Protection

A respiratory protection program that meets OSHA 1910.134, ANSI Z88.2 and / or CSA Z94.4-93 requirements must be followed whenever workplace conditions warrant use of a respirator.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Flexible plastic sheet	Physical State	Solid
Odor	Mild acrylic-like	Color	Various
Odor Threshold	Not available	pH	Not available
Melting Point	Not available	Boiling Point	Not available
Freezing point	Not available	Evaporation Rate	Not available
Boiling Point Range	Not available	Flammability (solid, gas)	Not available

Safety Data Sheet

Material Name: Sure-Flex Reinforced KEE HP Membranes and Accessories

Autoignition	Not available	Flash Point	Not available
Vapor Density (air=1)	Not available	Vapor Pressure	Not available
Water Solubility	Not available	Specific Gravity (water=1)	1.20 – 1.40
Viscosity	Not available	Solubility (Other)	Not available

Other Information

No additional information available.

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable under normal conditions of use.

Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Keep away from heat, sparks or open flame

Incompatible Materials

None known

Hazardous decomposition products

Gases or vapors such as oxides of carbon, oxides of nitrogen, hydrocarbons, hydrochloric acid, acrylic acid, and other organic compounds may be released in a fire.

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

Unlikely under normal conditions

Skin Contact

Unlikely under normal conditions

Eye Contact

Unlikely under normal conditions

Ingestion

Unlikely under normal conditions.

Acute and Chronic Toxicity

No data available

Immediate Effects

No immediate effects known.

Safety Data Sheet

Material Name: Sure-Flex Reinforced KEE HP Membranes and Accessories

Delayed Effects

No delayed effects known.

Irritation/Corrosivity Data

My cause skin irritation with repeated contact. No other effects known.

Respiratory Sensitization

No data available.

Dermal Sensitization

No data available.

Component Carcinogenicity

No data available

Germ Cell Mutagenicity

No data available.

Reproductive Toxicity

No data available..

Specific Target Organ Toxicity - Single Exposure

No data available

Specific Target Organ Toxicity - Repeated Exposure

No data available

Aspiration hazard

No data available.

Medical Conditions Aggravated by Exposure

No data available.

Additional Data

No additional information available.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

No data available

Component Analysis - Aquatic Toxicity

No data available

Persistence and Degradability

No information available for the product.

Bioaccumulative Potential

No information available for the product.

Mobility

No information available for the product.

Other Toxicity

No additional information available.

Safety Data Sheet

Material Name: Sure-Flex Reinforced KEE HP Membranes and Accessories

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

(1) Recycle / reprocess; (2) Incineration including energy recovery of waste material in a permitted facility in accordance with local, state or federal regulations; (3) Landfilling in a licensed facility in accordance with local, state or federal regulations

Section 14 - TRANSPORT INFORMATION

US DOT Information:

UN/NA #: Not regulated

IATA Information:

UN#: Not regulated

TDG Information:

UN#: Not regulated

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan:

None

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: No Chronic Health: No Fire: No Pressure: No Reactivity: No

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

None known

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

This product contains chemicals known to the State of California to cause cancer and/or birth defects or other reproductive harm.

Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL:

None known

Safety Data Sheet

Material Name: Sure-Flex Reinforced KEE HP Membranes and Accessories

Component Analysis - Inventory

Finished product is not hazardous. Component analysis not required.

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 0 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 0 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

New SDS: March 29, 2016

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition



Safety Data Sheet

Material Name: Sure-Flex Reinforced KEE HP Membranes and Accessories

that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

Low VOC Bonding Adhesive 1168

Synonyms

Bonding Adhesive

Chemical Family

Adhesive

Product Use

Low VOC Contact Adhesive

Restrictions on Use

For industrial use only.

Manufacturer Information

Carlisle SynTec
1285 Ritner Highway
Carlisle, PA 17013
USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Flammable Liquids - Category 2

Aspiration Hazard - Category 1

Serious Eye Damage/Eye Irritation - Category 2A

Skin Sensitization - Category 1A

Carcinogenicity - Category 2

Specific Target Organ Toxicity - Single Exposure - Category 1 (central nervous system)

Specific Target Organ Toxicity - Single Exposure - Category 3

Specific Target Organ Toxicity - Repeated Exposure - Category 1 (central nervous system)

Specific Target Organ Toxicity - Repeated Exposure - Category 2 (blood)

GHS Label Elements

Symbol(s)



Signal Word

Safety Data Sheet

Material Name: Low VOC Bonding Adhesive 1168

Product #: 318847

Danger

Hazard Statement(s)

Highly flammable liquid and vapor
May be fatal if swallowed and enters airways
Causes serious eye irritation
May cause allergic skin reaction
Suspected of causing cancer
Causes damage to organs
May cause drowsiness or dizziness
Causes damage to organs through prolonged or repeated exposure
May cause damage to organs through prolonged or repeated exposure

Precautionary Statement(s)

Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Keep container tightly closed
Keep away from heat/sparks/open flame/hot surfaces - No smoking
Ground/Bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting equipment
Take precautionary measures against static discharge
Use only non-sparking tools
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapours/spray
Wash thoroughly after handling
Contaminated work clothing must not be allowed out of the workplace
Do not eat, drink or smoke when using this product

Response

In case of fire: Use appropriate media to extinguish
If exposed: Call a POISON CENTER or doctor/physician
IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor if you feel unwell
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse
IF SWALLOWED: Immediately call a POISON CENTER/doctor
Do NOT induce vomiting
Specific treatment (see label)

Storage

Store in a well-ventilated place. Keep container tightly closed
Keep cool
Store locked up

Safety Data Sheet

Material Name: Low VOC Bonding Adhesive 1168

Product #: 318847

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

Other Hazards

No additional information available.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
Mixture	Chlorinated polypropylene	0.1-1
Trade Secret	Polyphenol antioxidant	0.1-1
1309-48-4	Magnesium oxide	0.1-1
1314-13-2	Zinc oxide	0.1-1
Trade Secret	Heat reactive phenolic resin	1-5
108-88-3	Toluene	3-7
67-64-1	Acetone	1-5
Mixture	Polychloroprene polymer	10-30
98-56-6	PCBTF	60-100

Section 4 - FIRST AID MEASURES

Description of Necessary Measures

If exposed or concerned: Call a POISON CENTER or doctor/physician.

Inhalation

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

Skin

Remove contaminated clothing and wash it before reuse. Rinse skin with water/shower. If skin irritation or rash occurs, seek medical advice/attention.

Eyes

Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

Safety Data Sheet

Material Name: Low VOC Bonding Adhesive 1168

Product #: 318847

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Most Important Symptoms/Effects

Acute

May be fatal if swallowed and enters airways. Causes serious eye irritation. May cause allergic skin reaction. Causes damage to central nervous system. May cause drowsiness or dizziness.

Delayed

Suspected of causing cancer. Causes damage to organs through prolonged or repeated exposure: central nervous system, blood.

Note to Physicians

Contains toluene.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Dry chemical, foam or carbon dioxide. Water may be ineffective.

Unsuitable Extinguishing Media

Do not use high-pressure water streams.

Special Hazards Arising from the Chemical

Highly flammable liquid and vapor. Vapors are heavier than air and may travel a considerable distance to a source of ignition and flashback.

Hazardous Combustion Products

Oxides of carbon, oxides of nitrogen

Advice for firefighters

Keep away from heat/sparks/open flame/hot surfaces - No smoking. Ground/bond container and receiving equipment. Take action to prevent static discharges.

Fire Fighting Measures

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up

Remove all sources of ignition. Avoid breathing vapors. Ventilate affected area. Absorb with earth, sand or other non-combustible material and transfer to container. Dike for later disposal. Dispose in accordance with all applicable regulations.

Safety Data Sheet

Material Name: Low VOC Bonding Adhesive 1168

Product #: 318847

Environmental Precautions

Avoid release to the environment.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep container tightly closed. Keep away from heat, sparks, open flame, and hot surfaces - No smoking. Ground/bond container and receiving equipment. Use explosion-proof equipment. Take precautionary measures against static discharge. Use non-sparking tools. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. **KEEP OUT OF REACH OF CHILDREN.**

Conditions for Safe Storage, Including any Incompatibilities

Store in a well-ventilated place. Keep container tightly closed

Keep cool

Store locked up

Keep away from heat and ignition sources. Do not cut, puncture, or weld on or near this container. Empty containers may contain product residue.

Incompatible Materials

Acids, bases, strong oxidizing agents

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Magnesium oxide	1309-48-4	
ACGIH:	10 mg/m3 TWA inhalable fraction	
NIOSH:	750 mg/m3 IDLH fume	
OSHA (US):	15 mg/m3 TWA fume, total particulate	
Mexico:	10 mg/m3 TWA LMPE-PPT as Mg fume	
Zinc oxide	1314-13-2	
ACGIH:	2 mg/m3 TWA respirable fraction	10 mg/m3 STEL respirable fraction
NIOSH:	5 mg/m3 TWA dust and fume	10 mg/m3 STEL fume
	15 mg/m3 Ceiling dust	500 mg/m3 IDLH

Safety Data Sheet

Material Name: Low VOC Bonding Adhesive 1168

Product #: 318847

OSHA (US):	5 mg/m ³ TWA fume; 15 mg/m ³ TWA total dust; 5 mg/m ³ TWA respirable fraction	
Mexico:	5 mg/m ³ TWA LMPE-PPT fume; 10 mg/m ³ TWA LMPE-PPT dust	
	10 mg/m ³ STEL [LMPE-CT] fume	
Toluene	108-88-3	
ACGIH:	20 ppm TWA	
NIOSH:	100 ppm TWA; 375 mg/m ³ TWA	150 ppm STEL; 560 mg/m ³ STEL
	500 ppm IDLH	
Europe:	50 ppm TWA; 192 mg/m ³ TWA	100 ppm STEL; 384 mg/m ³ STEL
	Possibility of significant uptake through the skin	
OSHA (US):	200 ppm TWA	300 ppm Ceiling
Mexico:	50 ppm TWA LMPE-PPT; 188 mg/m ³ TWA LMPE-PPT	
	Skin - potential for cutaneous absorption	
Acetone	67-64-1	
ACGIH:	250 ppm TWA	500 ppm STEL
NIOSH:	250 ppm TWA; 590 mg/m ³ TWA	2500 ppm IDLH (10% LEL)
Europe:	500 ppm TWA; 1210 mg/m ³ TWA	
OSHA (US):	1000 ppm TWA; 2400 mg/m ³ TWA	
Mexico:	1000 ppm TWA LMPE-PPT; 2400 mg/m ³ TWA LMPE-PPT	
	1260 ppm STEL [LMPE-CT]; 3000 mg/m ³ STEL [LMPE-CT]	

Biological limit value

There are no biological limit values for any of this product's components.

Engineering Controls

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear chemical safety goggles with a faceshield to protect against skin and eye contact when appropriate.

Skin Protection

Wear work clothes with long sleeves. Wear protective shoes.

Safety Data Sheet

Material Name: Low VOC Bonding Adhesive 1168

Product #: 318847

Respiratory Protection

A NIOSH approved air-purifying respirator with an appropriate cartridge or canister may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	yellowish liquid	Physical State	liquid
Odor	hydrocarbon	Color	yellowish
Odor Threshold	Not available	pH	Not available
Melting Point	-95 - -33 °C (-139--27 °F)	Boiling Point	56 - 139 °C (133-283 °F)
Freezing point	Not available	Evaporation Rate	1.2
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	465 °C (869 °F)	Flash Point	-17 °C (0 °F)
Lower Explosive Limit	0.9 %	Decomposition	Not available
Upper Explosive Limit	12.8 %	Vapor Pressure	12.5 mmHg
Vapor Density (air=1)	5.8	Specific Gravity (water=1)	Not available
Water Solubility	Negligible	Partition coefficient: n-octanol/water	Not available
Viscosity	5000 cps	Solubility (Other)	Hydrocarbons
Density	1.13 (relative)	VOC	<250 g/L

Other Information

No additional information available.

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.

Chemical Stability

Safety Data Sheet

Material Name: Low VOC Bonding Adhesive 1168

Product #: 318847

Stable under normal conditions of use.

Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

Incompatible Materials

Acids, bases, strong oxidizing agents

Hazardous decomposition products

Oxides of carbon, oxides of nitrogen

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

May cause drowsiness or dizziness.

Skin Contact

May cause allergic skin reaction. May cause skin irritation.

Eye Contact

Causes serious eye irritation.

Ingestion

May be fatal if swallowed and enters airways. May cause gastrointestinal irritation.

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Chlorinated polypropylene (Mixture)
Oral LD50 Rat 5000 mg/kg

Polyphenol antioxidant (Trade Secret)
Oral LD50 Rat >5000 mg/kg
Dermal LD50 Rabbit >5000 mg/kg
Inhalation LC50 Rat >165 mg/L 1 h

Magnesium oxide (1309-48-4)
Oral LD50 Rat >5000 mg/kg

Zinc oxide (1314-13-2)
Oral LD50 Rat >15000 mg/kg
Inhalation LC50 Rat >5.7 mg/L

Toluene (108-88-3)

Safety Data Sheet

Material Name: Low VOC Bonding Adhesive 1168

Product #: 318847

Oral LD50 Rat >7000 mg/kg
 Dermal LD50 Rabbit 12 - 14 g/kg
 Inhalation LC50 Rat 30 - 35 mg/L

Acetone (67-64-1)

Oral LD50 Rat 5800 mg/kg
 Dermal LD50 Guinea pig >7246 mg/kg
 Inhalation LC50 Rat 32000 ppm 4 h

Polychloroprene polymer (Mixture)

Oral LD50 Rat >5000 mg/kg

PCBTF (98-56-6)

Oral LD50 Rat 13 g/kg
 Dermal LD50 Rabbit >2 mL/kg
 Inhalation LC50 Rat 33 mg/L 4 h

Immediate Effects

May be fatal if swallowed and enters airways. Causes serious eye irritation. May cause allergic skin reaction. Causes damage to central nervous system. May cause drowsiness or dizziness.

Delayed Effects

Suspected of causing cancer. Causes damage to organs through prolonged or repeated exposure: central nervous system, blood.

Irritation/Corrosivity Data

Causes serious eye irritation.

Respiratory Sensitization

No data available.

Dermal Sensitization

May cause allergic skin reaction.

Component Carcinogenicity

Magnesium oxide	1309-48-4
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
Toluene	108-88-3
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))
Acetone	67-64-1
ACGIH:	A4 - Not Classifiable as a Human Carcinogen

Safety Data Sheet

Material Name: Low VOC Bonding Adhesive 1168

Product #: 318847

Germ Cell Mutagenicity

No data available.

Reproductive Toxicity

No data available.

Specific Target Organ Toxicity - Single Exposure

Central nervous system

Specific Target Organ Toxicity - Repeated Exposure

Blood, central nervous system

Aspiration hazard

May be fatal if swallowed and enters airways.

Medical Conditions Aggravated by Exposure

May cause allergic skin reaction. Aspiration into the lungs may cause chemical pneumonitis.

Additional Data

No additional information available.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

Avoid release to the environment.

Component Analysis - Aquatic Toxicity

Polyphenol antioxidant	Trade Secret
Fish:	LC50 96 h Oncorhynchus mykiss >0.2 mg/L [semi-static]
Algae:	EC50 72 h Pseudokirchneriella subcapitata >0.2 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna >0.2 mg/L IUCLID
Toluene	108-88-3
Fish:	LC50 96 h Pimephales promelas 15.22 - 19.05 mg/L [flow-through] (1 day old); LC50 96 h Pimephales promelas 12.6 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.89 - 7.81 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 14.1 - 17.16 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.8 mg/L [semi-static]; LC50 96 h Lepomis macrochirus 11 - 15 mg/L [static]; LC50 96 h Oryzias latipes 54 mg/L [static]; LC50 96 h Poecilia reticulata 28.2 mg/L [semi-static]; LC50 96 h Poecilia reticulata 50.87 - 70.34 mg/L [static]

Safety Data Sheet

Material Name: Low VOC Bonding Adhesive 1168

Product #: 318847

Algae:	EC50 96 h Pseudokirchneriella subcapitata >433 mg/L IUCLID; EC50 72 h Pseudokirchneriella subcapitata 12.5 mg/L [static] EPA
Invertebrate:	EC50 48 h Daphnia magna 5.46 - 9.83 mg/L [static] EPA; EC50 48 h Daphnia magna 11.5 mg/L IUCLID
Acetone	67-64-1
Fish:	LC50 96 h Oncorhynchus mykiss 4.74 - 6.33 mL/L; LC50 96 h Pimephales promelas 6210 - 8120 mg/L [static]; LC50 96 h Lepomis macrochirus 8300 mg/L
Invertebrate:	EC50 48 h Daphnia magna 10294 - 17704 mg/L [static] EPA; EC50 48 h Daphnia magna 12600 - 12700 mg/L IUCLID
PCBTF	98-56-6
Invertebrate:	EC50 48 h Daphnia magna 3.68 mg/L IUCLID

Persistence and Degradability

No information available for the product.

Bioaccumulative Potential

No information available for the product.

Mobility

No information available for the product.

Other Toxicity

No additional information available.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

Shipping Name:Adhesives

Hazard Class: 3

UN/NA #: UN1133

Packing Group: II

Required Label(s): 3

Additional information: Special Provisions (172.102): 149, B52, IB2, T4, TP1, TP8

Safety Data Sheet

Material Name: Low VOC Bonding Adhesive 1168

Product #: 318847

IATA Information:

UN#: UN1133

IMDG Information:

UN#: UN1133

TDG Information:

UN#: UN1133

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Toluene	108-88-3
SARA 313:	1 % de minimis concentration
CERCLA:	1000 lb final RQ; 454 kg final RQ
Acetone	67-64-1
CERCLA:	5000 lb final RQ; 2270 kg final RQ
PCBTF	98-56-6
TSCA 12b:	Section 4 , 1 % de minimus concentration

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: Yes **Chronic Health:** Yes **Fire:** Yes **Pressure:** No **Reactivity:** No

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Magnesium oxide	1309-48-4	Yes	Yes	Yes	Yes	Yes
Zinc oxide	1314-13-2	Yes	Yes	Yes	Yes	Yes
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes

Safety Data Sheet

Material Name: Low VOC Bonding Adhesive 1168

Product #: 318847

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects

Toluene	108-88-3
Repro/Dev. Tox	developmental toxicity , 1/1/1991

Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

Magnesium oxide	1309-48-4
	1 %
Zinc oxide	1314-13-2
	1 %
Toluene	108-88-3
	1 %
Acetone	67-64-1
	1 %

Component Analysis - Inventory

Chlorinated polypropylene (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

Polyphenol antioxidant (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

Magnesium oxide (1309-48-4)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Zinc oxide (1314-13-2)

Safety Data Sheet

Material Name: Low VOC Bonding Adhesive 1168

Product #: 318847

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Toluene (108-88-3)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Acetone (67-64-1)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Yellow dye (2481-94-9)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

PCBTF (98-56-6)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 2* Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 2 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Safety Data Sheet

Material Name: Low VOC Bonding Adhesive 1168

Product #: 318847

Summary of Changes

Revision Date: June 1, 2018

Revision Note: General Update

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

Low VOC Bonding Adhesive

Synonyms

Contact Adhesive

Chemical Family

Adhesive

Product Use

Contact Adhesive for TPO/EPDM Single-ply roofing

Restrictions on Use

For industrial use only.

Manufacturer Information

Carlisle SynTec
1285 Ritner Highway
Carlisle, PA 17013 USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (Chemtrec)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Flammable Liquids - Category 2

Aspiration Hazard - Category 1

Serious Eye Damage/Eye Irritation - Category 2A

Skin Sensitization - Category 1A

Carcinogenicity - Category 2

Specific Target Organ Toxicity - Single Exposure - Category 1 (central nervous system)

Specific Target Organ Toxicity - Single Exposure - Category 3

Specific Target Organ Toxicity - Repeated Exposure - Category 1 (central nervous system)

Specific Target Organ Toxicity - Repeated Exposure - Category 2 (blood)

GHS Label Elements

Symbol(s)



Signal Word

Danger

Safety Data Sheet

Material Name: Low VOC Bonding Adhesive

Product #303090

Hazard Statement(s)

Highly flammable liquid and vapor
May be fatal if swallowed and enters airways
Causes serious eye irritation
May cause allergic skin reaction
Suspected of causing cancer
Causes damage to organs
May cause respiratory irritation. May cause drowsiness or dizziness
Causes damage to organs through prolonged or repeated exposure
May cause damage to organs through prolonged or repeated exposure

Precautionary Statement(s)

Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Keep container tightly closed
Keep away from heat/sparks/open flame/hot surfaces - No smoking
Ground/Bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting equipment
Take precautionary measures against static discharge
Use only non-sparking tools
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapours/spray
Wash thoroughly after handling
Contaminated work clothing must not be allowed out of the workplace
Do not eat, drink or smoke when using this product

Response

In case of fire: Use appropriate media to extinguish
If exposed: Call a POISON CENTER or doctor/physician
IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor if you feel unwell
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse
IF SWALLOWED: Immediately call a POISON CENTER/doctor
Do NOT induce vomiting
Specific treatment (see label)

Storage

Store in a well-ventilated place. Keep container tightly closed
Keep cool
Store locked up

Safety Data Sheet

Material Name: Low VOC Bonding Adhesive

Product #303090

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

Statement of Unknown Toxicity

21.537152% of the mixture consists of ingredient(s) of unknown acute toxicity.

Other Hazards

No additional information available.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
Mixture	Polychloroprene	7-13
Mixture	Chlorinated polypropylene	0.1-1
Trade Secret	Polyphenol antioxidant	0.1-1
1309-48-4	Magnesium oxide	0.1-1
1314-13-2	Zinc oxide	0.1-1
Trade Secret	Heat reactive phenolic resin	1-5
108-88-3	Toluene	3-7
67-64-1	Acetone	1-5
540-88-5	tert-Butyl acetate	30-60
Mixture	Styrene butadiene polymer	0.5-1.5
Mixture	Phenolic resin	0.5-1.5
79-20-9	Methyl acetate	10-30

Section 4 - FIRST AID MEASURES

Description of Necessary Measures

If exposed or concerned: Call a POISON CENTER or doctor/physician.

Inhalation

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

Skin

Safety Data Sheet

Material Name: Low VOC Bonding Adhesive

Product #303090

Remove contaminated clothing and wash it before reuse. Rinse skin with water/shower. If skin irritation or rash occurs, seek medical advice/attention.

Eyes

Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Most Important Symptoms/Effects

Acute

May be fatal if swallowed and enters airways. Causes serious eye irritation. May cause allergic skin reaction. Causes damage to central nervous system. May cause respiratory irritation. May cause drowsiness or dizziness.

Delayed

Suspected of causing cancer. Causes damage to organs through prolonged or repeated exposure: central nervous system, blood.

Note to Physicians

Contains toluene.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Dry chemical, foam or carbon dioxide. Water may be ineffective.

Unsuitable Extinguishing Media

Do not use high-pressure water streams.

Special Hazards Arising from the Chemical

Highly flammable liquid and vapor. Vapors are heavier than air and may travel a considerable distance to a source of ignition and flashback.

Hazardous Combustion Products

Oxides of carbon, oxides of nitrogen

Advice for firefighters

Keep away from heat/sparks/open flame/hot surfaces - No smoking. Ground/bond container and receiving equipment. Take action to prevent static discharges.

Fire Fighting Measures

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up

Remove all sources of ignition. Avoid breathing vapors. Ventilate affected area. Absorb with earth, sand or other non-combustible material and transfer to container. Dike for later disposal. Dispose in accordance with all applicable regulations.

Environmental Precautions

Avoid release to the environment.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep container tightly closed. Keep away from heat, sparks, open flame, and hot surfaces - No smoking. Ground/bond container and receiving equipment. Use explosion-proof equipment. Take precautionary measures against static discharge. Use non-sparking tools. Use only outdoors or in a well-ventilated area. Vapors will travel. Prevent vapors from entering buildings through open windows or ventilation systems. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. KEEP OUT OF REACH OF CHILDREN.

Conditions for Safe Storage, Including any Incompatibilities

Store in a well-ventilated place. Keep container tightly closed

Keep cool

Store locked up

Keep away from heat and ignition sources. Do not cut, puncture, or weld on or near this container. Empty containers may contain product residue.

Incompatible Materials

Acids, bases, strong oxidizing agents

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Magnesium oxide	1309-48-4
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Safety Data Sheet

Material Name: Low VOC Bonding Adhesive

Product #303090

ACGIH:	10 mg/m ³ TWA inhalable fraction	
NIOSH:	750 mg/m ³ IDLH fume	
OSHA (US):	15 mg/m ³ TWA fume, total particulate	
Mexico:	10 mg/m ³ TWA LMPE-PPT as Mg fume	
Zinc oxide	1314-13-2	
ACGIH:	2 mg/m ³ TWA respirable fraction	10 mg/m ³ STEL respirable fraction
NIOSH:	5 mg/m ³ TWA dust and fume	10 mg/m ³ STEL fume
	15 mg/m ³ Ceiling dust	500 mg/m ³ IDLH
OSHA (US):	5 mg/m ³ TWA fume; 15 mg/m ³ TWA total dust; 5 mg/m ³ TWA respirable fraction	
Mexico:	5 mg/m ³ TWA LMPE-PPT fume; 10 mg/m ³ TWA LMPE-PPT dust	
	10 mg/m ³ STEL [LMPE-CT] fume	
Toluene	108-88-3	
ACGIH:	20 ppm TWA	
NIOSH:	100 ppm TWA; 375 mg/m ³ TWA	150 ppm STEL; 560 mg/m ³ STEL
	500 ppm IDLH	
Europe:	50 ppm TWA; 192 mg/m ³ TWA	100 ppm STEL; 384 mg/m ³ STEL
	Possibility of significant uptake through the skin	
OSHA (US):	200 ppm TWA	300 ppm Ceiling
Mexico:	50 ppm TWA LMPE-PPT; 188 mg/m ³ TWA LMPE-PPT	
	Skin - potential for cutaneous absorption	
Acetone	67-64-1	
ACGIH:	250 ppm TWA	500 ppm STEL
NIOSH:	250 ppm TWA; 590 mg/m ³ TWA	2500 ppm IDLH (10% LEL)
Europe:	500 ppm TWA; 1210 mg/m ³ TWA	

Safety Data Sheet

Material Name: Low VOC Bonding Adhesive

Product #303090

OSHA (US):	1000 ppm TWA; 2400 mg/m ³ TWA	
Mexico:	1000 ppm TWA LMPE-PPT; 2400 mg/m ³ TWA LMPE-PPT	
	1260 ppm STEL [LMPE-CT]; 3000 mg/m ³ STEL [LMPE-CT]	
tert-Butyl acetate	540-88-5	
ACGIH:	200 ppm TWA	
NIOSH:	200 ppm TWA; 950 mg/m ³ TWA	1500 ppm IDLH (10% LEL)
OSHA (US):	200 ppm TWA; 950 mg/m ³ TWA	
Mexico:	200 ppm TWA LMPE-PPT; 950 mg/m ³ TWA LMPE-PPT	
	250 ppm STEL [LMPE-CT]; 1190 mg/m ³ STEL [LMPE-CT]	
Styrene butadiene polymer	Mixture	
NIOSH:	10 mg/m ³ TWA total dust; 5 mg/m ³ TWA respirable dust	
OSHA (US):	15 mg/m ³ TWA total dust; 5 mg/m ³ TWA respirable fraction	
Mexico:	10 mg/m ³ TWA LMPE-PPT	20 mg/m ³ STEL [LMPE-CT]
Methyl acetate	79-20-9	
ACGIH:	200 ppm TWA	250 ppm STEL
NIOSH:	200 ppm TWA; 610 mg/m ³ TWA	250 ppm STEL; 760 mg/m ³ STEL
	3100 ppm IDLH (10% LEL)	
OSHA (US):	200 ppm TWA; 610 mg/m ³ TWA	
Mexico:	200 ppm TWA LMPE-PPT; 610 mg/m ³ TWA LMPE-PPT	
	250 ppm STEL [LMPE-CT]; 760 mg/m ³ STEL [LMPE-CT]	

Biological limit value

There are no biological limit values for any of this product's components.

Engineering Controls

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Safety Data Sheet

Material Name: Low VOC Bonding Adhesive

Product #303090

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear chemical safety goggles with a faceshield to protect against skin and eye contact when appropriate.

Skin Protection

Wear work clothes with long sleeves. Wear protective shoes.

Respiratory Protection

A NIOSH approved air-purifying respirator with an appropriate cartridge or canister may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Light yellow Liquid	Physical State	liquid
Odor	sweet	Color	Light yellow
Odor Threshold	Not available	pH	Not available
Melting Point	Not available	Boiling Point	56 - 111 °C (132-231 °F)
Freezing point	Not available	Evaporation Rate	3.8
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	465 °C (869 °F)	Flash Point	-18 °C (-0.4 °F)
Lower Explosive Limit	1.2 %	Decomposition	Not available
Upper Explosive Limit	12.8 %	Vapor Pressure	83 mmHg
Vapor Density (air=1)	4	Specific Gravity (water=1)	Not available
Water Solubility	Negligible	Partition coefficient: n-octanol/water	Not available
Viscosity	3500 cps	Solubility (Other)	Hydrocarbons
Density	0.97 (relative)	VOC	<250 g/L

Other Information

No additional information available.

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable under normal conditions of use.

Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

Incompatible Materials

Acids, bases, strong oxidizing agents

Hazardous decomposition products

Oxides of carbon, oxides of nitrogen

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure**Inhalation**

May cause respiratory irritation. May cause drowsiness or dizziness.

Skin Contact

May cause allergic skin reaction. May cause skin irritation.

Eye Contact

Causes serious eye irritation.

Ingestion

May be fatal if swallowed and enters airways. May cause gastrointestinal irritation.

Acute and Chronic Toxicity**Component Analysis - LD50/LC50**

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Polychloroprene (Mixture)

Oral LD50 Rat 20000 mg/kg

Chlorinated polypropylene (Mixture)

Oral LD50 Rat 5000 mg/kg

Polyphenol antioxidant (Trade Secret)

Oral LD50 Rat >5000 mg/kg

Dermal LD50 Rabbit >5000 mg/kg

Inhalation LC50 Rat >165 mg/L 1 h

Safety Data Sheet

Material Name: Low VOC Bonding Adhesive

Product #303090

Magnesium oxide (1309-48-4)

Oral LD50 Rat >5000 mg/kg

Zinc oxide (1314-13-2)

Oral LD50 Rat >15000 mg/kg

Inhalation LC50 Rat >5.7 mg/L

Toluene (108-88-3)

Oral LD50 Rat >7000 mg/kg

Dermal LD50 Rabbit 12 - 14 g/kg

Inhalation LC50 Rat 30 - 35 mg/L

Acetone (67-64-1)

Oral LD50 Rat 5800 mg/kg

Dermal LD50 Guinea pig >7246 mg/kg

Inhalation LC50 Rat 32000 ppm 4 h

Polychloroprene polymer (Mixture)

Oral LD50 Rat >5000 mg/kg

tert-Butyl acetate (540-88-5)

Oral LD50 4500 mg/kg

Dermal LD50 >2000 mg/kg

Inhalation LC50 12.52 mg/L 4 h

Thermoplastic elastomer (Trade Secret)

Oral LD50 >2000 mg/kg Dermal LD50 >2000 mg/kg

Styrene butadiene polymer (Mixture)

Oral LD50 Rat 6450 mg/kg

Methyl acetate (79-20-9)

Oral LD50 Rat 6482 g/kg

Dermal LD50 Rabbit >2000 mg/kg

Inhalation LC50 Rat >49 mg/L 4 hr

Immediate Effects

May be fatal if swallowed and enters airways. Causes serious eye irritation. May cause allergic skin reaction. Causes damage to central nervous system. May cause respiratory irritation. May cause drowsiness or dizziness.

Delayed Effects

Suspected of causing cancer. Causes damage to organs through prolonged or repeated exposure: central nervous system, blood.

Irritation/Corrosivity Data

Causes serious eye irritation. May cause respiratory irritation.

Respiratory Sensitization

Safety Data Sheet

Material Name: Low VOC Bonding Adhesive

Product #303090

No data available.

Dermal Sensitization

May cause allergic skin reaction.

Component Carcinogenicity

Polychloroprene	Mixture
IARC:	Supplement 7 [1987]; Monograph 19 [1979] (Group 3 (not classifiable))
Magnesium oxide	1309-48-4
ACGIH:	A4 – Not Classifiable as a Human Carcinogen
Toluene	108-88-3
ACGIH:	A4 – Not Classifiable as a Human Carcinogen
IARC:	Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))
Acetone	67-64-1
ACGIH:	A4 – Not Classifiable as a Human Carcinogen

Germ Cell Mutagenicity

No data available.

Reproductive Toxicity

No data available.

Specific Target Organ Toxicity – Single Exposure

Central nervous system

Specific Target Organ Toxicity – Repeated Exposure

Blood, central nervous system

Aspiration hazard

May be fatal if swallowed and enters airways.

Medical Conditions Aggravated by Exposure

May cause allergic skin reaction. Aspiration into the lungs may cause chemical pneumonitis.

Additional Data

No additional information available.

Section 12 – ECOLOGICAL INFORMATION

Safety Data Sheet

Material Name: Low VOC Bonding Adhesive

Product #303090

Ecotoxicity

Avoid release to the environment.

Component Analysis – Aquatic Toxicity

Polyphenol antioxidant	Trade Secret
Fish:	LC50 96 h Oncorhynchus mykiss >0.2 mg/L [semi-static]
Algae:	EC50 72 h Pseudokirchneriella subcapitata >0.2 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna >0.2 mg/L IUCLID
Toluene	108-88-3
Fish:	LC50 96 h Pimephales promelas 15.22 – 19.05 mg/L [flow-through] (1 day old); LC50 96 h Pimephales promelas 12.6 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.89 – 7.81 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 14.1 – 17.16 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.8 mg/L [semi-static]; LC50 96 h Lepomis macrochirus 11 – 15 mg/L [static]; LC50 96 h Oryzias latipes 54 mg/L [static]; LC50 96 h Poecilia reticulata 28.2 mg/L [semi-static]; LC50 96 h Poecilia reticulata 50.87 – 70.34 mg/L [static]
Algae:	EC50 96 h Pseudokirchneriella subcapitata >433 mg/L IUCLID; EC50 72 h Pseudokirchneriella subcapitata 12.5 mg/L [static] EPA
Invertebrate:	EC50 48 h Daphnia magna 5.46 – 9.83 mg/L [static] EPA; EC50 48 h Daphnia magna 11.5 mg/L IUCLID
Acetone	67-64-1
Fish:	LC50 96 h Oncorhynchus mykiss 4.74 – 6.33 mL/L; LC50 96 h Pimephales promelas 6210 – 8120 mg/L [static]; LC50 96 h Lepomis macrochirus 8300 mg/L
Invertebrate:	EC50 48 h Daphnia magna 10294 – 17704 mg/L [static] EPA; EC50 48 h Daphnia magna 12600 – 12700 mg/L IUCLID
tert-Butyl acetate	540-88-5
Fish:	LC50 96 h Pimephales promelas 296 – 362 mg/L [flow-through]; LC50 96 hr Oncorhynchus mykiss 240 mg/L
Invertebrate:	EC50 48 hr Daphnia magna 350 mg/L

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Material Name: Low VOC Bonding Adhesive

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Methyl acetate	79-20-9
Fish:	LC50 96 h Pimephales promelas 295 - 348 mg/L [flow-through]; LC50 96 h Brachydanio rerio 250 - 350 mg/L [static]
Algae:	EC50 72 h Desmodesmus subspicatus >120 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 1026.7 mg/L IUCLID

Persistence and Degradability

No information available for the product.

Bioaccumulative Potential

No information available for the product.

Mobility

No information available for the product.

Other Toxicity

No additional information available.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

Shipping Name:Adhesives

Hazard Class: 3

UN/NA #: UN1133

Packing Group: II

Required Label(s): 3

Additional information: Special Provisions (172.102): 149, B52, IB2, T4, TP1, TP8

IATA Information:

UN#: UN1133

IMDG Information:

UN#: UN1133

Safety Data Sheet

Material Name: Low VOC Bonding Adhesive

Product #303090

TDG Information:
UN#: UN1133

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Toluene	108-88-3
SARA 313:	1 % de minimis concentration
CERCLA:	1000 lb final RQ; 454 kg final RQ
Acetone	67-64-1
CERCLA:	5000 lb final RQ; 2270 kg final RQ
tert-Butyl acetate	540-88-5
CERCLA:	5000 lb final RQ; 2270 kg final RQ

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: Yes **Chronic Health:** Yes **Fire:** Yes **Pressure:** No **Reactivity:** No

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Magnesium oxide	1309-48-4	Yes	Yes	Yes	Yes	Yes
Zinc oxide	1314-13-2	Yes	Yes	Yes	Yes	Yes
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes
tert-Butyl acetate	540-88-5	Yes	Yes	Yes	Yes	Yes
Styrene butadiene polymer	Mixture	No	Yes	Yes	Yes	Yes
Methyl acetate	79-20-9	Yes	Yes	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects

Toluene	108-88-3
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Material Name: Low VOC Bonding Adhesive

Product #303090

Repro/Dev. Tox	developmental toxicity , 1/1/1991
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Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

Magnesium oxide	1309-48-4
	1 %
Zinc oxide	1314-13-2
	1 %
Toluene	108-88-3
	1 %
Acetone	67-64-1
	1 %
tert-Butyl acetate	540-88-5
	1 %
Methyl acetate	79-20-9
	1 %

Component Analysis - Inventory

Polychloroprene (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Chlorinated polypropylene (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

Polyphenol antioxidant (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX

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Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No
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Magnesium oxide (1309-48-4)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Zinc oxide (1314-13-2)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Toluene (108-88-3)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Acetone (67-64-1)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Yellow dye (2481-94-9)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Styrene butadiene polymer (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	NSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

Methyl Acetate (79-20-9)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
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Safety Data Sheet

Material Name: Low VOC Bonding Adhesive

Product #303090

Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes
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tert-Butyl acetate (540-88-5)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 2* Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 2 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

Revision Date: June 1, 2018

Revision Note: General Update

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.



Safety Data Sheet

Material Name: Low VOC Bonding Adhesive

Product #303090

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

Low VOC EPDM/TPO Primer

Synonyms

Primer

Chemical Family

Primer, mixture

Product Use

Solvent primer

Restrictions on Use

For industrial use only.

Manufacturer Information

Carlisle SynTec
1285 Ritner Highway
Carlisle, PA 17013 USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (Chemtrec)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Flammable Liquids - Category 3

Skin Corrosion/Irritation - Category 2

Serious Eye Damage/Eye Irritation - Category 2A

Skin Sensitization - Category 1A

Carcinogenicity - Category 2

Specific Target Organ Toxicity - Single Exposure - Category 3

Specific Target Organ Toxicity - Repeated Exposure - Category 2 (liver,kidneys)

GHS Label Elements

Symbol(s)



Signal Word

Warning

Safety Data Sheet

Material Name: Low VOC EPDM/TPO Primer

Product #: 329160

Hazard Statement(s)

Flammable liquid and vapor
Causes skin irritation
Causes serious eye irritation
May cause allergic skin reaction
Suspected of causing cancer
May cause drowsiness or dizziness
May cause damage to organs through prolonged or repeated exposure

Precautionary Statement(s)

Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Keep container tightly closed
Keep away from heat/sparks/open flame/hot surfaces - No smoking
Ground/Bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting equipment
Take precautionary measures against static discharge
Use only non-sparking tools
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapours/spray
Wash thoroughly after handling
Contaminated work clothing must not be allowed out of the workplace

Response

In case of fire: Use appropriate media to extinguish
IF exposed or concerned: Get medical advice/attention
IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor if you feel unwell
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower
If skin irritation or rash occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse
Specific treatment (see label)

Storage

Keep container tightly closed
Store in a well-ventilated place. Keep cool
Store locked up

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
64742-89-8	Solvent naphtha, petroleum, light aliphatic	7-13
Trade Secret	Isophorone Diisocyanate	0.5-1.5
108-88-3	Toluene	7-13
Trade Secret	Chlorinated polypropylene	0.1-1
98-56-6	PCBTF	60-100
67-63-0	Anhydrous Isopropanol	0.1-1

Section 4 - FIRST AID MEASURES

Description of Necessary Measures

IF exposed or concerned: Get medical advice/attention.

Inhalation

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

Skin

Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Eyes

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Ingestion

If swallowed, get medical attention.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Most Important Symptoms/Effects**Acute**

Causes skin irritation. Causes serious eye irritation. May cause allergic skin reaction. May cause drowsiness or dizziness.

Delayed

May cause allergic skin reaction. Suspected of causing cancer. May cause liver and kidney damage.

Safety Data Sheet

Material Name: Low VOC EPDM/TPO Primer

Product #: 329160

Note to Physicians

Contains: toluene, isopropanol.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Dry chemical, foam or carbon dioxide. Water may be ineffective.

Unsuitable Extinguishing Media

Do not use high-pressure water streams.

Special Hazards Arising from the Chemical

Flammable liquid and vapor.

Hazardous Combustion Products

Oxides of carbon, oxides of nitrogen

Advice for firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Fire Fighting Measures

Move container from fire area if it can be done without risk.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up

Remove all sources of ignition. Avoid breathing vapors. Ventilate the area. Use non-sparking tools. Use clean non-sparking tools to collect absorbed material and place it into loosely-covered metal or plastic containers for later disposal. Large spills: Dike for later disposal. Prevent entry into waterways, sewers, basements, or confined areas.

Environmental Precautions

Avoid release to the environment. Collect spillage.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat and ignition sources. When using do not smoke. Use non-sparking tools. Ground any equipment used in handling. Wash with plenty of soap and water. Wash contaminated clothing before reuse. KEEP OUT OF REACH OF CHILDREN. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting equipment. Take precautionary measures against static

Safety Data Sheet

Material Name: Low VOC EPDM/TPO Primer

Product #: 329160

discharge. Do not breathe gas, fumes, vapor, or spray. Contaminated work clothing should not be allowed out of the workplace.

Conditions for Safe Storage, Including any Incompatibilities

Keep container tightly closed
 Store in a well-ventilated place. Keep cool
 Store locked up
 Keep away from heat, sparks and flame. Do not cut, puncture, or weld on or near this container. Empty containers may contain product residue. Keep away from incompatible materials.

Incompatible Materials

Strong oxidizing agents, acids, bases

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Toluene	108-88-3	
ACGIH:	20 ppm TWA	
NIOSH:	100 ppm TWA; 375 mg/m ³ TWA	150 ppm STEL; 560 mg/m ³ STEL
	500 ppm IDLH	
Europe:	50 ppm TWA; 192 mg/m ³ TWA	100 ppm STEL; 384 mg/m ³ STEL
	Possibility of significant uptake through the skin	
OSHA (US):	200 ppm TWA	300 ppm Ceiling
Mexico:	50 ppm TWA LMPE-PPT; 188 mg/m ³ TWA LMPE-PPT	
	Skin - potential for cutaneous absorption	

Safety Data Sheet

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Product #: 329160

Anhydrous isopropanol	67-63-0	
ACGIH:	200 ppm TWA	
NIOSH:	400 ppm TWA; 980 mg/m ³ TWA	400 ppm STEL
	2000 ppm IDLH (10% LEL)	500 ppm STEL; 1225 mg/m ³ STEL
OSHA (US):	400 ppm TWA; 980 mg/m ³ TWA	
Mexico:	400 ppm TWA LMPE-PPT; 980 mg/m ³ TWA LMPE-PPT	
		500 ppm STEL [LMPE-CT]; 1225 mg/m ³ STEL [LMPE-CT]
PCBTF	98-56-6	
ACGIH:	2.5 mg/m ³ TWA as F (related to Fluorides)	
OSHA (US):	2.5 mg/m ³ TWA as F; 2.5 mg/m ³ TWA dust (related to Fluorides)	
Mexico:	2.5 mg/m ³ TWA LMPE-PPT as F (related to Fluorides)	

Biological limit value

There are no biological limit values for any of this product's components.

Engineering Controls

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin Protection

Wear appropriate chemical resistant clothing. Wear protective shoes.

Respiratory Protection

A NIOSH approved air-purifying respirator with an appropriate cartridge or canister may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	thin green liquid	Physical State	liquid
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Material Name: Low VOC EPDM/TPO Primer

Product #: 329160

Odor	Naphthenic distillate	Color	green
Odor Threshold	Not available	pH	Not available
Melting Point	-95 - -33 °C(-139 - 27°F)	Boiling Point	111 - 139 °C(232 -282°F)
Freezing point	Not available	Evaporation Rate	1.4
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	246 °C(475°F)	Flash Point	4 °C(40°F)
Lower Explosive Limit	0.9	Decomposition	Not available
Upper Explosive Limit	10.5	Vapor Pressure	7.4 mmHg
Vapor Density (air=1)	5.7	Specific Gravity (water=1)	Not available
Water Solubility	insoluble	Partition coefficient: n-octanol/water	Not available
Viscosity	<200 cps	Solubility (Other)	Not available
Density	1.177	VOC	<250 g/L

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable under normal conditions of use.

Possibility of Hazardous Reactions

Will not polymerize.

Conditions to Avoid

Keep away from heat/sparks/open flame/hot surfaces - No smoking. Take action to prevent static discharges. Avoid contact with incompatible materials.

Incompatible Materials

Strong oxidizing agents, acids, bases

Hazardous decomposition products

Oxides of carbon, oxides of nitrogen

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure**Inhalation**

May cause drowsiness or dizziness.

Skin Contact

Causes skin irritation.

Eye Contact

Causes serious eye irritation.

Ingestion

No information on significant adverse effects.

Acute and Chronic Toxicity**Component Analysis - LD50/LC50**

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Solvent naphtha, petroleum, light aliphatic (64742-89-8)

Oral LD50 Rat >2000 mg/kg

Dermal LD50 Rat >2000 mg/kg

Inhalation Rat >5000 ppm 1 hour

Isophorone Diisocyanate (Trade Secret)

Oral LD50 Rat >20000 mg/kg

Dermal LD50 Rabbit 4000 mg/kg

Inhalation LC50 Rat 5 mg/l 4 h

Toluene (108-88-3)

Oral LD50 >7000 mg/kg

Dermal LD50 12 - 14 g/kg

Inhalation LC50 30 mg/L

chlorinated homopolymer (Trade Secret)

Oral Rat 5000 mg/kg

PCBTF (98-56-6)

Oral LD50 Rat 13 g/kg

Dermal LD50 Rabbit >2 mL/kg

Inhalation LC50 Rat 33 mg/L 4 h

Anhydrous isopropanol (67-63-0)

Oral LD50 Rat 1870 mg/kg

Dermal LD50 Rabbit 4059 mg/kg

Inhalation LC50 Rat 72600 mg/m³ 4 h

Safety Data Sheet

Material Name: Low VOC EPDM/TPO Primer

Product #: 329160

Immediate Effects

Causes skin irritation. Causes serious eye irritation. May cause allergic skin reaction. May cause drowsiness or dizziness.

Delayed Effects

May cause allergic skin reaction. Suspected of causing cancer. May cause liver and kidney damage.

Irritation/Corrosivity Data

Causes skin and eye irritation.

Respiratory Sensitization

No information available for the product.

Dermal Sensitization

May cause allergic skin reaction.

Component Carcinogenicity

Toluene	108-88-3
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))
PCBTF	98-56-6
ACGIH:	A4 - Not Classifiable as a Human Carcinogen (related to Fluorides)
Anhydrous isopropanol	67-63-0
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 71 [1999]; Supplement 7 [1987]; Monograph 15 [1977] (Group 3 (not classifiable))

Germ Cell Mutagenicity

No information available for the product.

Tumorigenic Data

No data available

Reproductive Toxicity

No information available for the product.

Specific Target Organ Toxicity - Single Exposure

central nervous system

Specific Target Organ Toxicity - Repeated Exposure

Prolonged exposure may cause liver and kidney damage.

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Product #: 329160

Aspiration hazard

No information available for the product.

Medical Conditions Aggravated by Exposure

May cause allergic skin reaction.

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

Solvent naphtha, petroleum, light aliphatic	64742-89-8
Algae:	EC50 72 h Pseudokirchneriella subcapitata 4700 mg/L IUCLID
Isophorone Diisocyanate	Trade Secret
Fish:	LC50 96 h Oncorhynchus mykiss 9.22 mg/L
Invertebrate:	EC50 48 h Daphnia magna 6.14 mg/L IUCLID
Toluene	108-88-3
Fish:	LC50 96 h Pimephales promelas 15.22 - 19.05 mg/L [flow-through] (1 day old); LC50 96 h Pimephales promelas 12.6 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.89 - 7.81 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 14.1 - 17.16 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.8 mg/L [semi-static]; LC50 96 h Lepomis macrochirus 11 - 15 mg/L [static]; LC50 96 h Oryzias latipes 54 mg/L [static]; LC50 96 h Poecilia reticulata 28.2 mg/L [semi-static]; LC50 96 h Poecilia reticulata 50.87 - 70.34 mg/L [static]
Algae:	EC50 96 h Pseudokirchneriella subcapitata >433 mg/L IUCLID; EC50 72 h Pseudokirchneriella subcapitata 12.5 mg/L [static] EPA
Invertebrate:	EC50 48 h Daphnia magna 5.46 - 9.83 mg/L [static] EPA; EC50 48 h Daphnia magna 11.5 mg/L IUCLID
PCBTF	98-56-6
Invertebrate:	EC50 48 h Daphnia magna 3.68 mg/L IUCLID

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Anhydrous isopropanol	67-63-0
Fish:	LC50 96 h Pimephales promelas 9640 mg/L [flow-through]; LC50 96 h Pimephales promelas 11130 mg/L [static]; LC50 96 h Lepomis macrochirus >1400000 µg/L
Algae:	EC50 96 h Desmodesmus subspicatus >1000 mg/L IUCLID; EC50 72 h Desmodesmus subspicatus >1000 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 13299 mg/L IUCLID

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents/container in accordance with local/regional/national/international regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

Shipping Name: ADHESIVES

Hazard Class: 3

UN/NA #: UN1133

Packing Group: II

Required Label(s): 3

IATA Information:

Shipping Name: ADHESIVES

Hazard Class: 3

UN#: UN1133

Packing Group: II

Required Label(s): 3

TDG Information:

Shipping Name: ADHESIVES

Hazard Class: 3

UN#: UN1133

Packing Group: II

Section 15 - REGULATORY INFORMATION

Safety Data Sheet

Material Name: Low VOC EPDM/TPO Primer

Product #: 329160

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Toluene	108-88-3
SARA 313:	1 % de minimis concentration
CERCLA:	1000 lb final RQ; 454 kg final RQ
TSCA 12b:	Section 4 , 1 % de minimus concentration (related to Hydrocarbons, C>4)
PCBTF	98-56-6
TSCA 12b:	Section 4 , 1 % de minimus concentration
Anhydrous isopropanol	67-63-0
SARA 313:	1 % de minimis concentration (only if manufactured by the strong acid process, no supplier notification)

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: Yes Chronic Health: Yes Fire: Yes Pressure: No Reactivity: No

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes
PCBTF	98-56-6	Yes	No	Yes	Yes	Yes
Anhydrous isopropanol	67-63-0	Yes	Yes	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects

Toluene	108-88-3
Repro/Dev. Tox	developmental toxicity , 1/1/1991

Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in

Safety Data Sheet

Material Name: Low VOC EPDM/TPO Primer

Product #: 329160

products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

Toluene	108-88-3
	1 %
Anhydrous isopropanol	67-63-0
	1 %

Component Analysis - Inventory

Solvent naphtha, petroleum, light aliphatic (64742-89-8)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes

Isophorone Diisocyanate (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes

Anhydrous isopropanol (67-63-0)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes

Toluene (108-88-3)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

chlorinated homopolymer (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

PCBTf (98-56-6)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX



Safety Data Sheet

Material Name: Low VOC EPDM/TPO Primer

Product #: 329160

Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No
-----	-----	-----	-----	-----	-----	-----	-----	----	-----	-----	----

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 2 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 2 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

New SDS: 8/18/2017

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use



Safety Data Sheet

Material Name: Low VOC EPDM/TPO Primer

Product #: 329160

thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.



Safety Data Sheet

Material Name InsulBase® HD Polyiso, InsulBase® Polyiso, InsulBase® Tapered Polyiso, InsulBase® Tapered Polyiso Hinged Target Sump

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

InsulBase® HD Polyiso, InsulBase® Polyiso, InsulBase® Tapered Polyiso, InsulBase® Tapered Polyiso Hinged Target Sump

Synonyms

Polyiso Foam with Glass Reinforced Facer

Chemical Family

POLYISOCYANURATE Foam

Product Description

This product is as an article in accordance with 29 CFR 1910.1200.

Product Use

Thermal Insulation foams

Manufacturer Information

Carlisle SynTec
1285 Ritner Highway
Carlisle, PA 17013 USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (Chemtrec)

Section 2 - HAZARDS IDENTIFICATION

Component Related Regulatory Information

The components listed above are part of a product that is considered an “article” as defined in the OSHA Hazard Communication Standard, 29 CFR 1910.1200 and are considered “manufactured articles” as defined by the Canadian Hazardous Products Act (R.S.C., 1985, c. H-3) and as such are exempt from the requirement for an SDS. Under normal conditions of use, these components do not pose a hazard in the workplace or to the building occupants. Since this “article” poses no health hazard under normal conditions of use, there is no requirement for an SDS. In addition, “articles” are not included in the scope of the Globally Harmonized System (GHS). For that reason, the GHS labeling elements are not included on this SDS. Although these products are not subject to the OSHA or Canadian standards or GHS labelling elements, Carlisle would like to disclose as much health and safety information as possible to ensure that these products are handled and used properly. This SDS contains information critical to the safe handling and proper use of the products. It is recommended that this SDS should be retained and made available to the users of these products. In addition, the recommendations for handling and use of these products should be included in worker training programs.

GHS Label Elements

Symbol(s)

None needed according to classification criteria.

Signal Word



Safety Data Sheet

Material Name InsulBase® HD Polyiso, InsulBase® Polyiso, InsulBase® Tapered Polyiso, InsulBase® Tapered Polyiso Hinged Target Sump

None needed according to classification criteria.

Hazard Statement(s)

None needed according to classification criteria.

Precautionary Statement(s)

Prevention

None needed according to classification criteria.

Response

None needed according to classification criteria.

Storage

None needed according to classification criteria.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other Hazards

No additional information available.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent by weight
Not available	Polyisocyanurate Foam	75-80
109-66-0	Pentane	< 10
65996-61-4	Cellulose pulp	15-23
65997-17-3	Fiberglass	1-5

Section 4 - FIRST AID MEASURES

Description of Necessary Measures

Get medical advice/attention if you feel unwell.

Inhalation

If dust is inhaled, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Get medical advice/attention if you feel unwell.

Skin

If skin irritation or rash occurs: Wash with plenty of soap and water. Get medical attention if irritation develops or persists.



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Material Name InsulBase® HD Polyiso, InsulBase® Polyiso, InsulBase® Tapered Polyiso, InsulBase® Tapered Polyiso Hinged Target Sump

Eyes

Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do, prior to rinsing. If eye irritation persists, get medical advice/attention.

Ingestion

Do NOT induce vomiting. Rinse mouth thoroughly with water. Get medical advice/attention if you feel unwell.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Most Important Symptoms/Effects

Acute

Direct contact with dust may cause mechanical irritation of the eyes, skin, respiratory tract. May cause allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Delayed

No information on significant adverse effects.

Section 5 - FIREFIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Regular dry chemical, carbon dioxide, foam, water fog.

Unsuitable Extinguishing Media

None known.

Special Hazards Arising from the Chemical

Fumes from heating may cause irritation, allergic reactions.

Hazardous Combustion Products

Oxides of carbon.

Special Protective Equipment and Precautions for Firefighters

Wear full protective firefighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up

Avoid generating dust in the air.

Environmental Precautions

Prevent environmental discharge consistent with regulatory requirements.



Safety Data Sheet

Material Name InsulBase® HD Polyiso, InsulBase® Polyiso, InsulBase® Tapered Polyiso, InsulBase® Tapered Polyiso Hinged Target Sump

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Minimize dust generation and accumulation. Eliminate all sources of ignition. Do not breathe dust. Do not eat, drink or smoke when using this product. Do not get foam dust in eyes. Wear protective gloves and eye/face protection. Wash hands thoroughly after handling. Use only outdoors or in a well-ventilated area. Refer to handling and storage guidelines provided by the manufacturer.

Conditions for Safe Storage, Including any Incompatibilities

None needed according to classification criteria. Store on flat foundation. Elevate 3-4" above foundation to prevent contact with moisture. Keep only in original packaging. If packaging is opened, place waterproof but breathable tarp on product. Refer to handling and storage guidelines provided by the manufacturer.

Incompatible Materials

Acetone, methyl ethyl ketone, tetrahydrofuran, chlorine, chloroform, hydrogen peroxide, ethylene dichloride, dimethyl sulfoxide, dimethyl formamide.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Pentane	109-66-0
OSHA (US):	This component has exposure limits. However, this component is present in what is considered an "article" as defined in the OSHA Hazard Communication Standard, 29 CFR 1910.1200 and a "manufactured article" as defined by the Canadian Hazardous Products Act (R.S.C., 1985, c. H-3). Therefore, the exposure limits for this component are unnecessary to provide safe exposure controls. This component will not be released from the product under normal working conditions.

Biological limit value

There are no biological limit values for any of this product's components.

Engineering Controls

Provide local exhaust ventilation where dust may be generated. Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Safety glasses or goggles are recommended when there is a potential for eye contact.

Skin Protection

Work clothes with long sleeves and pants are recommended, but not required.



Safety Data Sheet

Material Name InsulBase® HD Polyiso, InsulBase® Polyiso, InsulBase® Tapered Polyiso, InsulBase® Tapered Polyiso Hinged Target Sump

Respiratory Protection

If respirable dusts are generated, respiratory protection may be needed. Consult with a health and safety professional for specific respirators appropriate for your use.

Glove Recommendations

Protective gloves are not required, but recommended.

Protective Materials

Recommended equipment: Provide emergency eye wash supplies in the immediate work area.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	light yellow foam	Physical State	solid
Odor	odorless to slight odor	Color	light yellow
Odor Threshold	Not available	pH	Not available
Melting Point	Not available	Boiling Point	Not applicable
Freezing point	Not applicable	Evaporation Rate	Not applicable
Boiling Point Range	Not applicable	Flammability (solid, gas)	Not available
Autoignition	Not available	Flash Point	Not applicable
Lower Explosive Limit	Not applicable	Decomposition	Not available
Upper Explosive Limit	Not applicable	Vapor Pressure	Not applicable
Vapor Density (air=1)	Not applicable	Specific Gravity (water=1)	1.5 - 2.5
Water Solubility	Insoluble	Partition coefficient: n-octanol/water	Not applicable
Viscosity	Not applicable	Solubility (Other)	Not available
Density	1.5 - 2.5 lbs/ft ³	VOC	contains Pentane

Other Information

No additional information available.

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.



Safety Data Sheet

Material Name InsulBase® HD Polyiso, InsulBase® Polyiso, InsulBase® Tapered Polyiso, InsulBase® Tapered Polyiso Hinged Target Sump

Chemical Stability

Stable under normal conditions of use.

Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Avoid dust generation and accumulation. Avoid heat, flames, sparks and other sources of ignition. Avoid contact with water or incompatible materials.

Incompatible Materials

Acetone, methyl ethyl ketone, tetrahydrofuran, chlorine, chloroform, hydrogen peroxide, ethylene dichloride, dimethyl sulfoxide, dimethyl formamide.

Hazardous decomposition products

Oxides of carbon.

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

Dust may cause irritation of the nose, throat and upper respiratory tract. May cause allergy or asthma symptoms or breathing difficulties if foam dust is inhaled.

Skin Contact

Dust may cause mechanical irritation. May cause allergic skin reaction.

Eye Contact

Direct contact with dust may cause mechanical irritation of the eyes.

Ingestion

No information on significant adverse effects.

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Pentane (109-66-0)

Non-hazardous acute toxicity values

Immediate Effects

Direct contact with dust may cause mechanical irritation of the eyes, skin, respiratory tract. May cause allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if foam dust is inhaled.

Delayed Effects

No information on significant adverse effects.

Irritation/Corrosivity Data

Direct contact with dust may cause mechanical irritation of the eyes, skin, respiratory tract.



Safety Data Sheet

Material Name InsulBase® HD Polyiso, InsulBase® Polyiso, InsulBase® Tapered Polyiso, InsulBase® Tapered Polyiso Hinged Target Sump

Respiratory Sensitization

May cause allergy or asthma symptoms or breathing difficulties if foam dust is inhaled.

Dermal Sensitization

May cause allergic skin reaction.

Component Carcinogenicity

Germ Cell Mutagenicity

No data available.

Tumorigenic Data

No data available.

Reproductive Toxicity

No data available.

Specific Target Organ Toxicity - Single Exposure

No target organs identified.

Specific Target Organ Toxicity - Repeated Exposure

No target organs identified.

Aspiration hazard

No data available.

Medical Conditions Aggravated by Exposure

May cause allergic reactions.

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

No LOLI ecotoxicity data are available for this product's components.

Persistence and Degradability

No studies have been established for this product.

Bioaccumulative Potential

No studies have been established for this product.

Mobility

No studies have been established for this product.

Other Toxicity

No additional information available.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods



Safety Data Sheet

Material Name InsulBase® HD Polyiso, InsulBase® Polyiso, InsulBase® Tapered Polyiso, InsulBase® Tapered Polyiso Hinged Target Sump

Product is not an EPA hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

UN/NA #: Not regulated

IATA Information:

UN#: Not regulated

IMDG Information:

UN#: Not regulated

TDG Information:

UN#: Not regulated

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Pentane	109-66-0	Yes	Yes	Yes	Yes	Yes
Fiberglass	65997-17-3	No	No	Yes	No	No

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer

Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL.

Pentane	109-66-0
	1 %



Safety Data Sheet

Material Name InsulBase® HD Polyiso, InsulBase® Polyiso, InsulBase® Tapered Polyiso, InsulBase® Tapered Polyiso Hinged Target Sump

Component Analysis - Inventory

Pentane (109-66-0)

US	Yes
----	-----

Cellulose pulp (65996-61-4)

US	Yes
----	-----

Fiberglass (65997-17-3)

US	Yes
----	-----

Section 16 - OTHER INFORMATION

Summary of Changes

Revision Date: September 25, 2019

Revision Note: General Update

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; BOD - Biochemical Oxygen Demand; C - Celsius; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CPR - Controlled Products Regulations; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; Kow - Octanol/water partition coefficient; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; OSHA - Occupational Safety and Health Administration; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be



Safety Data Sheet

Material Name InsulBase® HD Polyiso, InsulBase® Polyiso, InsulBase® Tapered Polyiso, InsulBase® Tapered Polyiso Hinged Target Sump

applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Safety Data Sheet

Material Name: SureSeal® 90-8-30A Bonding Adhesive

Product #: 302124

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name: SureSeal® 90-8-30A Bonding Adhesive

Synonyms: Solvent Based Adhesive

Chemical Family: Adhesive

Product Use: Bonding Adhesive for EPDM Single-Ply Roofing Membrane

Restrictions on Use: For industrial use only.

Manufacturer Information

Carlisle Coatings and Waterproofing
900 Hensley Lane
Wylie, TX 75098
www.carlisleccw.com

Medical Emergency
CHEMTREC (USA): 800-424-9300

MSDS Assistance: 972-442-6545
Technical Assistance: 888-229-2199
Customer Service: 888-229-0199

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Flammable Liquids - Category 2

Aspiration Hazard - Category 1

Skin Corrosion/Irritation - Category 2

Serious Eye Damage/Eye Irritation - Category 2A

Germ Cell Mutagenicity - Category 1B

Carcinogenicity - Category 1B

Reproductive Toxicity - Category 1B

Specific Target Organ Toxicity - Single Exposure - Category 1 (central nervous system, kidneys, liver, respiratory system)

Specific Target Organ Toxicity - Single Exposure - Category 2 (nervous system)

Specific Target Organ Toxicity - Single Exposure - Category 3

Specific Target Organ Toxicity - Repeated Exposure - Category 1 (central nervous system, kidneys, nervous system, respiratory system)

Specific Target Organ Toxicity - Repeated Exposure - Category 2 (blood, liver)

GHS Label Elements

Symbol(s)

Safety Data Sheet

Material Name: SureSeal® 90-8-30A Bonding Adhesive

Product #: 302124



Signal Word

Danger

Hazard Statement(s)

Highly flammable liquid and vapor

Causes skin irritation

Causes serious eye irritation

May cause genetic defects

May cause cancer

May damage fertility or the unborn child

Causes damage to organs

May cause respiratory irritation. May cause drowsiness or dizziness

Causes damage to organs through prolonged or repeated exposure

May be fatal if swallowed and enters airways

Precautionary Statement(s)

Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Keep container tightly closed

Ground/Bond container and receiving equipment

Use explosion-proof electrical/ventilating/lighting equipment

Use non-sparking tools

Use only outdoors or in a well-ventilated area

Take precautionary measures against static discharge

Do not breathe dust/fume/gas/mist/vapours/spray

Wash thoroughly after handling

Do not eat, drink or smoke when using this product

Wear protective gloves/protective clothing/eye protection/face protection

Use Personal Protective equipment as required

Response

In case of fire: Use appropriate media to extinguish

If exposed: Call a POISON CENTER or doctor/physician

IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing

Call a POISON CENTER or doctor if you feel unwell

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists, get medical advice/attention

IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower

If skin irritation occurs: Get medical advice/attention



Safety Data Sheet

Material Name: SureSeal® 90-8-30A Bonding Adhesive

Product #: 302124

Take off contaminated clothing and wash before reuse
Specific treatment (see label)
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Do NOT induce vomiting

Storage

Store in a well-ventilated place. Keep container tightly closed
Store locked up
Keep cool

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

Other Hazards

None known.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
Proprietary	Polychloroprene	10-30
Proprietary	Phenolic Resin	1-5
1309-48-4	Magnesium oxide (MgO)	0.5-1.5
108-88-3	Toluene	30-60
64742-89-8	Solvent naphtha, petroleum, light aliphatic	15-40
67-64-1	Acetone	5-10
1330-20-7	Xylenes (o-, m-, p- isomers)	1-5

Section 4 - FIRST AID MEASURES

Description of Necessary Measures

If exposed: Call a POISON CENTER or doctor/physician.

Inhalation

Remove person to fresh air and keep comfortable for breathing. Give artificial respiration if not breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin

Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Safety Data Sheet

Material Name: SureSeal® 90-8-30A Bonding Adhesive

Product #: 302124

Eyes

IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Ingestion

Aspiration hazard. Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. If vomiting occurs, keep head lower than hips to help prevent aspiration.

Indication of any immediate medical attention and special treatment needed

No additional information is available.

Most Important Symptoms/Effects

Acute

skin irritation, eye irritation, aspiration hazard, central nervous system damage, kidney damage, liver damage, respiratory system damage, nervous system damage, nervous system Effects.

Delayed

central nervous system damage, kidney damage, nervous system damage, respiratory system damage, blood Effects, liver effects.

Note to Physicians

If adverse effects occur, treat symptomatically and supportively.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Dry chemical, foam or carbon dioxide. Water may be ineffective.

Unsuitable Extinguishing Media

Do not scatter spilled material with high-pressure water streams.

Special Hazards Arising from the Chemical

Highly flammable. Vapors are heavier than air and may travel along the ground to distant sources and flash back.

Hazardous Combustion Products

Oxides of carbon, hydrogen cyanide, oxides of nitrogen.

Special Protective Equipment and Precautions for Firefighters

Wear self-contained breathing apparatus with a full facepiece and protective clothing.

Fire Fighting Measures

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

Safety Data Sheet

Material Name: SureSeal® 90-8-30A Bonding Adhesive

Product #: 302124

Methods and Materials for Containment and Cleaning Up

Eliminate all sources of ignition. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not touch or walk through spilled material. Prevent entry into waterways, sewers, basements, or confined areas. Absorb with earth, sand or other non-combustible material and transfer to container. Use non-sparking tools.

Environmental Precautions

Avoid release to the environment.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks, open flame, and hot surfaces - No smoking. Use non-sparking tools. Wash contaminated clothing before reuse. Do not get in eyes, on skin, or on clothing. Ground/bond container and receiving equipment. Wear protective gloves/clothing and eye/face protection. When using, do not eat, drink or smoke. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Do not breathe gas, fumes, vapor, or spray. Wash thoroughly after handling. Keep out of the reach of children.

Conditions for Safe Storage, Including any Incompatibilities

Store in a well-ventilated place. Keep container tightly closed. Store locked up. Keep cool. Do not cut, puncture, or weld on or near this container. Empty containers may contain product residue.

Incompatible Materials

Strong oxidizing agents, acids, bases.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Magnesium oxide (MgO)	1309-48-4	
ACGIH:	10 mg/m ³ TWA inhalable fraction	
NIOSH:	750 mg/m ³ IDLH fume	
OSHA (US):	15 mg/m ³ TWA fume, total particulate	
Mexico:	10 mg/m ³ TWA LMPE-PPT as Mg fume	
Toluene	108-88-3	
ACGIH:	20 ppm TWA	
NIOSH:	100 ppm TWA; 375 mg/m ³ TWA	150 ppm STEL; 560 mg/m ³ STEL
	500 ppm IDLH	

Safety Data Sheet

Material Name: SureSeal® 90-8-30A Bonding Adhesive

Product #: 302124

Europe:	50 ppm TWA; 192 mg/m ³ TWA	100 ppm STEL; 384 mg/m ³ STEL
	Possibility of significant uptake through the skin	
OSHA (US):	200 ppm TWA	300 ppm Ceiling
Mexico:	50 ppm TWA LMPE-PPT; 188 mg/m ³ TWA LMPE-PPT	
	Skin - potential for cutaneous absorption	
Acetone	67-64-1	
ACGIH:	500 ppm TWA	750 ppm STEL
NIOSH:	250 ppm TWA; 590 mg/m ³ TWA	2500 ppm IDLH (10% LEL)
Europe:	500 ppm TWA; 1210 mg/m ³ TWA	
OSHA (US):	1000 ppm TWA; 2400 mg/m ³ TWA	
Mexico:	1000 ppm TWA LMPE-PPT; 2400 mg/m ³ TWA LMPE-PPT	
	1260 ppm STEL [LMPE-CT]; 3000 mg/m ³ STEL [LMPE-CT]	
Xylenes (o-, m-, p-isomers)	1330-20-7	
ACGIH:	100 ppm TWA	150 ppm STEL
Europe:	50 ppm TWA (pure); 221 mg/m ³ TWA (pure)	100 ppm STEL (pure); 442 mg/m ³ STEL (pure)
	Possibility of significant uptake through the skin	
OSHA (US):	100 ppm TWA; 435 mg/m ³ TWA	
Mexico:	100 ppm TWA LMPE-PPT; 435 mg/m ³ TWA LMPE-PPT	
	150 ppm STEL [LMPE-CT]; 655 mg/m ³ STEL [LMPE-CT]	

Biological limit value

There are no biological limit values for any of this product's components.

Engineering Controls

Provide local exhaust ventilation system. If necessary, use appropriate local exhaust ventilation to keep exposures below the regulated limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Safety Data Sheet**Material Name: SureSeal® 90-8-30A Bonding Adhesive****Product #: 302124****Skin Protection**

Wear chemical resistant clothing and rubber boots when potential for contact with the material exists. Thoroughly clean and dry contaminated clothing before reuse.

Respiratory Protection

In case of inadequate ventilation wear respiratory protection.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Yellow liquid	Physical State	liquid
Odor	hydrocarbon	Color	yellow
Odor Threshold	Not available	pH	Not available
Melting Point	-48 °C	Boiling Point	56 - 139 °C
Freezing point	Not available	Evaporation Rate	0.6 - 0.83
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	223 °C	Flash Point	10 °C (CC)
Lower Explosive Limit	1.1 %	Decomposition	Not available
Upper Explosive Limit	12.8 %	Vapor Pressure	6.7 mm Hg (@ 204 °C)
Vapor Density (air=1)	2 - 3.7	Specific Gravity (water=1)	0.84
Water Solubility	Negligible	Partition coefficient: n-octanol/water	Not available
Viscosity	2500 cps	Solubility (Other)	Not available
Density	Not available	Volatility	79 - 83 %

Other Information

No information available for the product.

Section 10 - STABILITY AND REACTIVITY

Reactivity

No hazard expected.

Chemical Stability

Stable under normal conditions of use.

Safety Data Sheet

Material Name: SureSeal® 90-8-30A Bonding Adhesive

Product #: 302124

Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition.

Incompatible Materials

Strong oxidizing materials, acids, bases.

Hazardous decomposition products

Oxides of carbon, oxides of nitrogen.

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

Vapor or mist may cause respiratory tract irritation. May cause central nervous system effects. May cause nausea, dizziness, drowsiness and headache.

Skin Contact

Causes skin irritation.

Eye Contact

Causes serious eye irritation.

Ingestion

May cause gastrointestinal irritation.

Acute and Chronic Toxicity

Component Analysis - LD50/LC50: The components of this material have been reviewed in various sources and the following selected endpoints are published:

Zinc oxide (1314-13-2)

Oral LD50 Rat >5000 mg/kg

Phenol, 4-methyl-, reaction products with dicyclopentadiene and isobutylene (68610-51-5)

Oral LD50 Rat >200 mg/kg

Dermal LD50 Rabbit >5010 mg/kg

Inhalation LC50 Rat >165 mg/L 1 h

Toluene (108-88-3)

Oral LD50 Rat 2600 mg/kg

Dermal LD50 Rabbit 12,000 mg/kg

Inhalation LC50 Rat 12.5 mg/L 4 h

Solvent naphtha, petroleum, light aliphatic (64742-89-8)

Oral LD50 Mouse 5,000 mg/kg

Dermal LD50 Rabbit 3,000 mg/kg

Acetone (67-64-1)

Inhalation LC50 Rat 50,100 mg/m³ 8 h

Xylenes (o-, m-, p- isomers) (1330-20-7)

Oral LD50 Rat 3500 mg/kg

Dermal LD50 Rabbit >4350 mg/kg

Inhalation LC50 Rat 29.08 mg/L 4 h



Safety Data Sheet

Material Name: SureSeal® 90-8-30A Bonding Adhesive

Product #: 302124

Water (7732-18-5)

Oral LD50 Rat >90 mL/kg

Immediate Effects

Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. Central nervous system damage, kidney damage, liver damage, respiratory system damage, nervous system effects.

Delayed Effects

May cause respiratory irritation, central nervous system, kidneys, nervous system, blood. liver.

Irritation/Corrosivity Data

Causes serious eye irritation. Causes skin irritation. May cause respiratory irritation.

Respiratory Sensitization

No information available for the product.

Dermal Sensitization

No information available for the product.

Component Carcinogenicity

Polychloroprene	Proprietary
IARC:	Supplement 7 [1987]; Monograph 19 [1979](Group 3 (not classifiable))
Magnesium oxide (MgO)	1309-48-4
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
Toluene	108-88-3
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 71 [1999]; Monograph 47 [1989](Group 3 (not classifiable))
Acetone	67-64-1
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
Xylenes (o-, m-, p- isomers)	1330-20-7
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 71 [1999]; Monograph 47 [1989](Group 3 (not classifiable))

Germ Cell Mutagenicity

May cause genetic defects.

Safety Data Sheet

Material Name: SureSeal® 90-8-30A Bonding Adhesive

Product #: 302124

Reproductive Toxicity

May damage fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure

Central nervous system, kidney, liver, respiratory system. nervous system.

Specific Target Organ Toxicity - Repeated Exposure

Central nervous system, kidney, nervous system, respiratory system, blood, liver.

Aspiration hazard

Aspiration Hazard. Aspiration into the lungs may cause damage. May be fatal if swallowed and enters airways.

Medical Conditions Aggravated by Exposure

No data available.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

No additional information available.

Component Analysis - Aquatic Toxicity

Toluene	108-88-3
Fish:	LC50 96 h Pimephales promelas 15.22 - 19.05 mg/L [flow-through] (1 day old); LC50 96 h Pimephales promelas 12.6 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.89 - 7.81 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 14.1 - 17.16 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.8 mg/L [semi-static]; LC50 96 h Lepomis macrochirus 11 - 15 mg/L [static]; LC50 96 h Oryzias latipes 54 mg/L [static]; LC50 96 h Poecilia reticulata 28.2 mg/L [semi-static]; LC50 96 h Poecilia reticulata 50.87 - 70.34 mg/L [static]
Algae:	EC50 96 h Pseudokirchneriella subcapitata >433 mg/L IUCLID; EC50 72 h Pseudokirchneriella subcapitata 12.5 mg/L [static] EPA
Invertebrate:	EC50 48 h Daphnia magna 5.46 - 9.83 mg/L [static] EPA; EC50 48 h Daphnia magna 11.5 mg/L IUCLID
Solvent naphtha, petroleum, light aliphatic	64742-89-8
Algae:	EC50 72 h Pseudokirchneriella subcapitata 4,700 mg/L IUCLID
Acetone	67-64-1

Safety Data Sheet

Material Name: SureSeal® 90-8-30A Bonding Adhesive

Product #: 302124

Fish:	LC50 96 h Oncorhynchus mykiss 4.74 - 6.33 mL/L; LC50 96 h Pimephales promelas 6,210 – 8,120 mg/L [static]; LC50 96 h Lepomis macrochirus 8,300 mg/L
Invertebrate:	EC50 48 h Daphnia magna 10,294 – 17,704 mg/L [static] EPA; EC50 48 h Daphnia magna 12,600 – 12,700 mg/L IUCLID
Xylenes (o-, m-, p-isomers)	1330-20-7
Fish:	LC50 96 h Pimephales promelas 13.4 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 2.661 - 4.093 mg/L [static]; LC50 96 h Oncorhynchus mykiss 13.5 - 17.3 mg/L; LC50 96 h Lepomis macrochirus 13.1 - 16.5 mg/L [flow-through]; LC50 96 h Lepomis macrochirus 19 mg/L; LC50 96 h Lepomis macrochirus 7.711 - 9.591 mg/L [static]; LC50 96 h Pimephales promelas 23.53 - 29.97 mg/L [static]; LC50 96 h Cyprinus carpio 780 mg/L [semi-static]; LC50 96 h Cyprinus carpio >780 mg/L; LC50 96 h Poecilia reticulata 30.26 - 40.75 mg/L [static]
Algae:	EC50 72 h Pseudokirchneriella subcapitata 11 mg/L IUCLID (related to Aromatic hydrocarbons, C7-12, C8-rich)
Invertebrate:	EC50 48 h water flea 3.82 mg/L; LC50 48 h Gammarus lacustris 0.6 mg/L

Persistence and Degradability

No data available.

Bioaccumulative Potential

No data available.

Mobility

No data available.

Other Toxicity

No information available for the product.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose in accordance with all applicable regulations.



Safety Data Sheet

Material Name: SureSeal® 90-8-30A Bonding Adhesive

Product #: 302124

Section 14 - TRANSPORT INFORMATION

US DOT Information:

Shipping Name: Adhesive

Hazard Class: 3

UN/NA #: UN1133

Packing Group: II

Required Label(s): 3

TDG Information:

Shipping Name: Adhesive

Hazard Class: 3

UN#: UN1133

Packing Group: II

Required Label(s)

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Toluene	108-88-3
SARA 313:	1 % de minimis concentration
CERCLA:	1,000 lb final RQ; 454 kg final RQ
Acetone	67-64-1
CERCLA:	5,000 lb final RQ; 2,270 kg final RQ
Xylenes (o-, m-, p- isomers)	1330-20-7
SARA 313:	1 % de minimis concentration
CERCLA:	100 lb final RQ; 45.4 kg final RQ
TSCA 12b:	Section 4 , 1 % de minimus concentration (related to Hydrocarbons, C>4)

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: Yes **Chronic Health:** Yes **Fire:** Yes **Pressure:** No **Reactivity:** No

Safety Data Sheet

Material Name: SureSeal® 90-8-30A Bonding Adhesive

Product #: 302124

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Magnesium oxide (MgO)	1309-48-4	Yes	Yes	Yes	Yes	Yes
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes	Yes	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects

Toluene	108-88-3
Repro/Dev. Tox	developmental toxicity , initial date 1/1/91
	female reproductive toxicity , initial date 8/7/09

Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

Magnesium oxide (MgO)	1309-48-4
	1 %
Toluene	108-88-3
	1 %
Acetone	67-64-1
	1 %

Component Analysis - Inventory

Polychloroprene (Proprietary)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Magnesium oxide (MgO) (1309-48-4)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX



Safety Data Sheet

Material Name: SureSeal® 90-8-30A Bonding Adhesive

Product #: 302124

Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes
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Toluene (108-88-3)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Solvent naphtha, petroleum, light aliphatic (64742-89-8)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes

Acetone (67-64-1)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Xylenes (o-, m-, p- isomers) (1330-20-7)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
No	No	No	No	No	Yes	No	Yes	No	No	No	Yes

Section 16 - OTHER INFORMATION

NFPA Ratings

Health: 2 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

New 03/15/2015

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil



Safety Data Sheet

Material Name: SureSeal® 90-8-30A Bonding Adhesive

Product #: 302124

Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Reasonable care has been taken in the preparation of this information; however, the manufacturer makes no warranty whatsoever including the warranty of merchantability, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental, consequential, or other such damages resulting from its use or misuse.

Disclaimer:

Supplier gives no warranty whatsoever, including the warranties of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser shall determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental, consequential or any other damages arising out of the use or misuse of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights.

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name: Sure-Seal HP-250 Primer

Synonyms: Solvent-Based Primer

Chemical Family: Primer

Product Use: Cleaning and Priming EPDM Single-Ply Roofing Membranes

Restrictions on Use: For industrial use only.

Manufacturer Information

Carlisle SynTec

1285 Ritner Highway

Carlisle, PA 17013

USA

Phone: +1-800-479-6832

Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Flammable Liquids - Category 2

Skin Corrosion/Irritation - Category 2

Serious Eye Damage/Eye Irritation - Category 2A

Specific Target Organ Toxicity - Single Exposure - Category 3

Specific Target Organ Toxicity - Repeated Exposure - Category 2

GHS Label Elements

Symbol(s)



Signal Word

Danger

Hazard Statement(s)

Highly flammable liquid and vapor

Causes skin irritation

Causes serious eye irritation

May cause respiratory irritation. May cause drowsiness or dizziness

May cause damage to organs through prolonged or repeated exposure

Safety Data Sheet

Material Name: Sure-Seal HP-250 Primer

Product #: 302070

Precautionary Statement(s)

Prevention

Keep container tightly closed
Keep away from heat/sparks/open flame/hot surfaces - No smoking
Ground/Bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting equipment
Take precautionary measures against static discharge
Use only non-sparking tools
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapours/spray
Wash thoroughly after handling

Response

In case of fire: Use appropriate media to extinguish
IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse
Call a POISON CENTER or doctor if you feel unwell
Specific treatment (see label)

Storage

Store in a well-ventilated place. Keep container tightly closed
Keep cool
Store locked up

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
108-88-3	Toluene	60-100
64742-89-8	Heptane	5-10
Trade Secret	Phenolic resin	0.1-1
Trade Secret	Silicon adsorbent mixture	0.1-1
67-63-0	Anhydrous Isopropanol	0.1-1

Safety Data Sheet

Material Name: Sure-Seal HP-250 Primer

Product #: 302070

Trade Secret	Dibutyltin dilaurate	< 0.1
Trade Secret	Isophorone diisocyanate	0.1-1

Section 4 - FIRST AID MEASURES

Description of Necessary Measures

If exposed or concerned: Call a POISON CENTER or doctor/physician.

Inhalation

Remove person to fresh air and keep comfortable for breathing. Give artificial respiration if not breathing. Immediately call a POISON CENTER or doctor/physician.

Skin

Remove/Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention.

Eyes

Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion

If swallowed, do not induce vomiting. Immediately call a POISON CENTER or doctor/physician.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Most Important Symptoms/Effects

Acute

Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. Causes damage to central nervous system.

Delayed

Prolonged exposure may cause liver, kidney and central nervous system damage.

Note to Physicians

Contains: toluene, heptane, isopropanol.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Dry chemical, foam or carbon dioxide. Water may be ineffective. Use water spray to keep containers cool.

Unsuitable Extinguishing Media

Do not use high-pressure water streams.

Safety Data Sheet

Material Name: Sure-Seal HP-250 Primer

Product #: 302070

Special Hazards Arising from the Chemical

Can burn and explode easily when exposed to open flames or high heat.

Hazardous Combustion Products

Oxides of carbon

Fire Fighting Measures

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up

Remove all sources of ignition. Avoid breathing vapors. Ventilate affected area. Absorb with earth, sand or other non-combustible material and transfer to container. Use non-sparking tools. Dike for later disposal.

Environmental Precautions

Avoid release to the environment.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke when using this product. Keep away from heat/sparks/open flames/hot surfaces. Take precautionary measures against static discharge. Ground/bond container and receiving equipment. Use non-sparking tools. Use only outdoors or in a well-ventilated area. Vapors will travel. Prevent vapors from entering buildings through open windows or ventilation systems. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid contact during pregnancy/while nursing. **KEEP OUT OF REACH OF CHILDREN.**

Conditions for Safe Storage, Including any Incompatibilities

Store in a well-ventilated place. Keep container tightly closed

Keep cool

Store locked up

Keep away from heat and ignition sources. Keep away from incompatible materials. Do not cut, puncture, or weld on or near this container.

Incompatible Materials

Strong oxidizing agents, acids, bases, amines

Safety Data Sheet

Material Name: Sure-Seal HP-250 Primer

Product #: 302070

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Toluene	108-88-3	
ACGIH:	20 ppm TWA	
NIOSH:	100 ppm TWA; 375 mg/m ³ TWA	150 ppm STEL; 560 mg/m ³ STEL
	500 ppm IDLH	
Europe:	50 ppm TWA; 192 mg/m ³ TWA	100 ppm STEL; 384 mg/m ³ STEL
	Possibility of significant uptake through the skin	
OSHA (US):	200 ppm TWA	300 ppm Ceiling
Mexico:	50 ppm TWA LMPE-PPT; 188 mg/m ³ TWA LMPE-PPT	
	Skin - potential for cutaneous absorption	
Anhydrous isopropanol	67-63-0	
ACGIH:	200 ppm TWA	
NIOSH:	400 ppm TWA; 980 mg/m ³ TWA	400 ppm STEL
	2000 ppm IDLH (10% LEL)	500 ppm STEL; 1225 mg/m ³ STEL
OSHA (US):	400 ppm TWA; 980 mg/m ³ TWA	
Mexico:	400 ppm TWA LMPE-PPT; 980 mg/m ³ TWA LMPE-PPT	
		500 ppm STEL [LMPE-CT]; 1225 mg/m ³ STEL [LMPE-CT]

Biological limit value

There are no biological limit values for any of this product's components.

Engineering Controls

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Safety Data Sheet

Material Name: Sure-Seal HP-250 Primer

Product #: 302070

Skin Protection

Wear appropriate work clothing. Wear protective shoes. Recommended material: protective skin cream.

Respiratory Protection

A NIOSH approved air-purifying respirator with an appropriate cartridge or canister may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	dark liquid	Physical State	liquid
Odor	hydrocarbon	Color	olive,green,dark gray
Odor Threshold	Not available	pH	Not available
Melting Point	-95 °C (-139 °F)	Boiling Point	90 - 111 °C (194-231 °F)
Freezing point	Not available	Evaporation Rate	2.5
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	230 °C (475 °F)	Flash Point	-7.2 °C (19 °F)
Lower Explosive Limit	1 %	Decomposition	Not available
Upper Explosive Limit	7 %	Vapor Pressure	24.9 mmHg
Vapor Density (air=1)	3.2	Specific Gravity (water=1)	Not available
Water Solubility	Negligible	Partition coefficient: n-octanol/water	Not available
Viscosity	<200 cps	Solubility (Other)	Not available
Density	0.88 (relative)	VOC	727 g/L

Other Information

No additional information available.

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.

Material Name: Sure-Seal HP-250 Primer

Product #: 302070

Chemical Stability

Stable under normal conditions of use.

Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

Incompatible Materials

Strong oxidizing agents, acids, bases, amines

Hazardous decomposition products

Oxides of carbon

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure**Inhalation**

May cause respiratory irritation. May cause drowsiness or dizziness.

Skin Contact

Causes skin irritation.

Eye Contact

Causes serious eye irritation.

Ingestion

May cause gastrointestinal irritation.

Acute and Chronic Toxicity**Component Analysis - LD50/LC50**

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Toluene (108-88-3)

Oral LD50 Rat 2600 mg/kg

Dermal LD50 Rabbit 12000 mg/kg

Inhalation LC50 Rat 30 - 35 mg/L 4

Heptane (64742-89-8)

Oral LD50 Mouse 5000 mg/kg

Dermal LD50 Rabbit 3000 mg/kg

Silicon adsorbent mixture (Trade Secret)

Oral LD50 Rat >32000 mg/kg

Dermal LD50 Rabbit >2000 mg/kg

Dibutyltin dilaurate (Trade Secret)

Oral LD50 Rat 45 mg/kg

Dermal LD50 Rabbit 630 mg/kg

Safety Data Sheet

Material Name: Sure-Seal HP-250 Primer

Product #: 302070

Isophorone diisocyanate (Trade Secret)
 Oral LD50 Rat >20000 mg/kg
 Dermal LD50 Rabbit >2000 mg/kg
 Inhalation LC50 Rat 5 mg/L 4 h

Anhydrous isopropanol (67-63-0)
 Oral LD50 Rat 1870 mg/kg
 Dermal LD50 Rabbit 4059 mg/kg
 Inhalation LC50 Rat 72600 mg/m³ 4 h

Immediate Effects

Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. Causes damage to central nervous system.

Delayed Effects

Prolonged exposure may cause liver, kidney and central nervous system damage.

Irritation/Corrosivity Data

Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.

Respiratory Sensitization

No data available.

Dermal Sensitization

No data available.

Component Carcinogenicity

Toluene	108-88-3
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))
Anhydrous isopropanol	67-63-0
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 71 [1999]; Supplement 7 [1987]; Monograph 15 [1977] (Group 3 (not classifiable))

Germ Cell Mutagenicity

No data available.

Reproductive Toxicity

No data available.

Specific Target Organ Toxicity - Single Exposure

Causes damage to central nervous system.

Specific Target Organ Toxicity - Repeated Exposure

Prolonged exposure may cause liver, kidney and central nervous system damage.

Aspiration hazard

May cause aspiration hazard.

Safety Data Sheet

Material Name: Sure-Seal HP-250 Primer

Product #: 302070

Medical Conditions Aggravated by Exposure

Aspiration into the lungs may cause chemical pneumonitis.

Additional Data

No additional information available.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

Avoid release to the environment.

Component Analysis - Aquatic Toxicity

Toluene	108-88-3
Fish:	LC50 96 h Pimephales promelas 15.22 - 19.05 mg/L [flow-through] (1 day old); LC50 96 h Pimephales promelas 12.6 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.89 - 7.81 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 14.1 - 17.16 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.8 mg/L [semi-static]; LC50 96 h Lepomis macrochirus 11 - 15 mg/L [static]; LC50 96 h Oryzias latipes 54 mg/L [static]; LC50 96 h Poecilia reticulata 28.2 mg/L [semi-static]; LC50 96 h Poecilia reticulata 50.87 - 70.34 mg/L [static]
Algae:	EC50 96 h Pseudokirchneriella subcapitata >433 mg/L IUCLID; EC50 72 h Pseudokirchneriella subcapitata 12.5 mg/L [static] EPA
Invertebrate:	EC50 48 h Daphnia magna 5.46 - 9.83 mg/L [static] EPA; EC50 48 h Daphnia magna 11.5 mg/L IUCLID
Heptane	64742-89-8
Algae:	EC50 72 h Pseudokirchneriella subcapitata 4700 mg/L IUCLID
Isophorone diisocyanate	Trade Secret
Fish:	LC50 96 h Oncorhynchus mykiss 9.22 mg/L
Invertebrate:	EC50 48 h Daphnia magna 6.14 mg/L IUCLID
Anhydrous isopropanol	67-63-0
Fish:	LC50 96 h Pimephales promelas 9640 mg/L [flow-through]; LC50 96 h Pimephales promelas 11130 mg/L [static];

Safety Data Sheet

Material Name: Sure-Seal HP-250 Primer

Product #: 302070

	LC50 96 h Lepomis macrochirus >1400000 µg/L
Algae:	EC50 96 h Desmodesmus subspicatus >1000 mg/L IUCLID; EC50 72 h Desmodesmus subspicatus >1000 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 13299 mg/L IUCLID

Persistence and Degradability

No information available for the product.

Bioaccumulative Potential

No information available for the product.

Mobility

No information available for the product.

Other Toxicity

No additional information available.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

Shipping Name: Adhesives

Hazard Class: 3

UN/NA #: UN1133

Packing Group: II

Required Label(s): Red flammable liquid

IATA Information:

Shipping Name: ADHESIVES

Hazard Class: 3

UN#: UN1133

Packing Group: II

Required Label(s): 3

TDG Information:

Shipping Name: ADHESIVES

Hazard Class: 3

UN#: UN1133

Packing Group: II

Required Label(s):

Safety Data Sheet

Material Name: Sure-Seal HP-250 Primer

Product #: 302070

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Toluene	108-88-3
SARA 313:	1 % de minimis concentration
CERCLA:	1000 lb final RQ; 454 kg final RQ
Anhydrous isopropanol	67-63-0
SARA 313:	1 % de minimis concentration (only if manufactured by the strong acid process, no supplier notification)

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: Yes Chronic Health: Yes Fire: Yes Pressure: No Reactivity: No

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes
Anhydrous isopropanol	67-63-0	Yes	Yes	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects

Toluene	108-88-3
Repro/Dev. Tox	developmental toxicity , initial date 1/1/91
	female reproductive toxicity , initial date 8/7/09

Component Analysis - Inventory

Toluene (108-88-3)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Heptane (64742-89-8)

Safety Data Sheet

Material Name: Sure-Seal HP-250 Primer

Product #: 302070

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes

Isophorondiamine-isobutyraldimine (54914-37-3)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	No	No	Yes	Yes	No

Dibutyltin dilaurate (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Isophorone diisocyanate (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes

Anhydrous isopropanol (67-63-0)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 2 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 2 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Safety Data Sheet

Material Name: Sure-Seal HP-250 Primer

Product #: 302070

Summary of Changes

Revision date: January 24, 2019

Revision – New formulation

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Safety Data Sheet

Material Name: Sure-Weld TPO Membrane and Related Accessories

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

Sure-Weld TPO Membrane (Standard, GS, EU, HS, EXTRA, FleeceBACK, APEEL and SAT, etc.); Non-Reinforced Flashing, FleeceBACK RL TPO, FleeceBACK FR TPO, Rib Profiles and accessories constructed from membrane including Coverstrip, Corners, Pipe Seals, Sealant Pockets, Tubing Wraps, etc.

Synonyms

Membrane, Tapes, Overlayment Strips and Accessories

Product Use

Roof and Waterproofing Membrane

Restrictions on Use

For industrial use only.

Manufacturer Information

Carlisle SynTec
1285 Ritner Highway
Carlisle, PA 17013 USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (Chemtrec)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

The products listed above are considered “articles” as defined in the OSHA Hazard Communication Standard, 29 CFR 1910.1200 and are considered “manufactured articles” as defined by the Canadian Hazardous Products Act (R.S.C., 1985, c. H-3) and as such are exempt from the requirement for an SDS . Under normal conditions of use, these products do not pose a hazard in the workplace or to the building occupants. Since these products or “articles” pose no health hazard under normal conditions of use, there is no requirement for an SDS. In addition, “articles” are not included in the scope of the Globally Harmonized System (GHS). For that reason, the GHS labeling elements are not included on this SDS. Although these products are not subject to the OSHA or Canadian standards or GHS labelling elements, Carlisle would like to disclose as much health and safety information as possible to ensure that these products are handled and used properly. This SDS contains information critical to the safe handling and proper use of the products. It is recommended that this SDS should be retained and made available to the users of these products. In addition, the recommendations for handling and use of these products should be included in worker training programs.

GHS Label Elements

Safety Data Sheet

Material Name: Sure-Weld TPO Membrane and Related Accessories

Symbol(s)

None required

Signal Word

None required

Hazard Statement(s)

None required

Precautionary Statement(s)

Prevention

None required

Response

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

Other Hazards

No additional information available.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
9010-79-1	Propylene ethylene copolymer	>50
Trade Secret	Flame retardants (non-hazardous)	>15
Trade Secret	Stabilizers	>5

Section 4 - FIRST AID MEASURES

Description of Necessary Measures

None known.

Inhalation

Inhalation of vapor from this product during heat welding may cause respiratory tract irritation.

Skin

Exposure to hot surfaces during heat welding may cause thermal burns.

Eyes

Vapor from this product during heat welding may irritate eyes.

Ingestion

Cannot be ingested under normal circumstances.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Safety Data Sheet

Material Name: Sure-Weld TPO Membrane and Related Accessories

Most Important Symptoms/Effects

Acute

None known

Delayed

None known

Note to Physicians

Nothing known to note

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Use dry chemical, carbon dioxide, or water spray.

Unsuitable Extinguishing Media

None reported.

Special Hazards Arising from the Chemical

Oil bleeds from material when burning.

Hazardous Combustion Products

Toxic gases or vapors, such as carbon monoxide and other organic compounds may be released in a fire.

Advice for firefighters

Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.

Fire Fighting Measures

Standard procedures for Class A fires. Use self-contained breathing apparatus (SCBA) and protective clothing for structural fire fighting.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up

Sweep up and dispose in accordance with all applicable regulations.

Environmental Precautions

Provide adequate ventilation during heat welding.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

None known. Suggest wearing protective gloves. Wash thoroughly after handling. KEEP OUT OF REACH OF CHILDREN.

Safety Data Sheet

Material Name: Sure-Weld TPO Membrane and Related Accessories

Conditions for Safe Storage, Including any Incompatibilities

This product may react with strong oxidizing agents and should not be stored near such materials. Best to store rolls in areas protected by automatic sprinklers. Store product below 60°C (140°F) to prevent roll sticking at installation

Incompatible Materials

Strong oxidizing agents.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

No known exposure limits.

Biological limit value

There are no biological limit values for any of this product's components.

Engineering Controls

Provide adequate ventilation. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Sunglasses which filter out ultraviolet light are strongly recommended since the white surface is highly reflective to sunlight.

Skin Protection

Work boots and work clothing recommended.

Respiratory Protection

A respiratory protection program that meets OSHA 1910.134, ANSI Z88.2 and / or CSA Z94.4-93 requirements must be followed whenever workplace conditions warrant use of a respirator.

Glove Recommendations

Wear protective gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White-on-black sheet; (white may be replaced by tan, gray, etc.)	Physical State	solid
Odor	Slight waxy odor	Color	Black or white
Odor Threshold	Not available	pH	Not available
Melting Point	Not available	Boiling Point	Not available
Freezing point	>120	Evaporation Rate	Not available
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	>357 °C	Flash Point	>329 °C
Vapor Density (air=1)	Not available	Vapor Pressure	Not available

Safety Data Sheet

Material Name: Sure-Weld TPO Membrane and Related Accessories

Water Solubility	Practically insoluble in water	Specific Gravity (water=1)	0.95 – 1.05
Viscosity	Not available	Solubility (Other)	Not available

Other Information

No additional information available.

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable under normal conditions of use.

Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Keep away from heat, sparks or open flame

Incompatible Materials

None known

Hazardous decomposition products

Gases or vapors such as carbon monoxide, carbon dioxide, or oxides of nitrogen, and other organic compounds may be released in a fire.

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

Unlikely under normal conditions

Skin Contact

Unlikely under normal conditions

Eye Contact

Unlikely under normal conditions

Ingestion

Unlikely under normal conditions.

Acute and Chronic Toxicity

No data available

Immediate Effects

No immediate effects known.

Delayed Effects

No delayed effects known.

Safety Data Sheet

Material Name: Sure-Weld TPO Membrane and Related Accessories

Irritation/Corrosivity Data

My cause skin irritation with repeated contact. No other effects known.

Respiratory Sensitization

No data available.

Dermal Sensitization

No data available.

Component Carcinogenicity

No data available

Germ Cell Mutagenicity

No data available.

Reproductive Toxicity

No data available..

Specific Target Organ Toxicity - Single Exposure

No data available

Specific Target Organ Toxicity - Repeated Exposure

No data available

Aspiration hazard

No data available.

Medical Conditions Aggravated by Exposure

No data available.

Additional Data

No additional information available.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

No data available

Component Analysis - Aquatic Toxicity

No data available

Persistence and Degradability

No information available for the product.

Bioaccumulative Potential

No information available for the product.

Mobility

No information available for the product.

Other Toxicity

No additional information available.

Section 13 - DISPOSAL CONSIDERATIONS

Safety Data Sheet

Material Name: Sure-Weld TPO Membrane and Related Accessories

Disposal Methods

(1) Recycle / reprocess; (2) Incineration including energy recovery of waste material in a permitted facility in accordance with local, state or federal regulations; (3) Landfilling in a licensed facility in accordance with local, state or federal regulations.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

UN/NA #: Not regulated

IATA Information:

UN#: Not regulated

TDG Information:

UN#: Not regulated

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan:
None

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: No Chronic Health: No Fire: No Pressure: No Reactivity: No

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

None known

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

None known.

Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL:

None known

Component Analysis - Inventory

Finished product is not hazardous. Component analysis not required.

Safety Data Sheet

Material Name: Sure-Weld TPO Membrane and Related Accessories

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 0 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 0 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

Revision Date: October 22, 2020

Revision Note: General Update

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

Sure-Weld TPO Bonding Adhesive

Synonyms

Contact Adhesive

Chemical Family

Adhesive

Product Use

Contact Adhesive for TPO Single-ply roofing.

Restrictions on Use

For industrial use only.

Manufacturer Information

Carlisle SynTec
1285 Ritner Highway
Carlisle, PA 17013 USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (Chemtrec)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Flammable Liquids - Category 2

Aspiration Hazard - Category 1

Skin Corrosion/Irritation - Category 2

Serious Eye Damage/Eye Irritation - Category 2A

Skin Sensitization - Category 1A

Carcinogenicity - Category 2

Reproductive Toxicity - Category 1B

Specific Target Organ Toxicity - Single Exposure - Category 1 (central nervous system, kidneys, liver, respiratory system)

Specific Target Organ Toxicity - Single Exposure - Category 3

Specific Target Organ Toxicity - Repeated Exposure - Category 1 (central nervous system, respiratory system)

Specific Target Organ Toxicity - Repeated Exposure - Category 2 (blood, liver)

GHS Label Elements**Symbol(s)**

Safety Data Sheet

Material Name: Sure-Weld TPO Bonding Adhesive

Product #: 302099

**Signal Word**

Danger

Hazard Statement(s)

Highly flammable liquid and vapor

May be fatal if swallowed and enters airways

Causes skin irritation

Causes serious eye irritation

May cause allergic skin reaction

Suspected of causing cancer

May damage fertility or the unborn child

Causes damage to organs

May cause drowsiness or dizziness

Causes damage to organs through prolonged or repeated exposure

May cause damage to organs through prolonged or repeated exposure

Precautionary Statement(s)**Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Keep container tightly closed

Keep away from heat/sparks/open flame/hot surfaces - No smoking

Ground/Bond container and receiving equipment

Use explosion-proof electrical/ventilating/lighting equipment

Take precautionary measures against static discharge

Use only non-sparking tools

Use only outdoors or in a well-ventilated area

Wear protective gloves/protective clothing/eye protection/face protection

Do not breathe dust/fume/gas/mist/vapours/spray

Wash thoroughly after handling

Contaminated work clothing must not be allowed out of the workplace

Do not eat, drink or smoke when using this product

Response

In case of fire: Use appropriate media to extinguish

If exposed: Call a POISON CENTER or doctor/physician

IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing

Call a POISON CENTER or doctor if you feel unwell

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower

If skin irritation or rash occurs: Get medical advice/attention

Safety Data Sheet

Material Name: Sure-Weld TPO Bonding Adhesive

Product #: 302099

IF SWALLOWED: Immediately call a POISON CENTER/doctor
 Do NOT induce vomiting
 Specific treatment (see label)

Storage

Store in a well-ventilated place. Keep container tightly closed
 Keep cool
 Store locked up

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
Mixture	Polychloroprene	7-13
Mixture	Styrene butadiene polymer	0.5-1.5
Mixture	Chlorinated polypropylene	0.1-1
Trade Secret	Polyphenol antioxidant	0.1-1
1309-48-4	Magnesium oxide	0.1-1
1314-13-2	Zinc oxide	0.1-1
Trade Secret	Heat reactive phenolic resin	1-5
108-88-3	Toluene	15-40
64742-89-8	Solvent naphtha, petroleum, light aliphatic	10-30
67-64-1	Acetone	5-10
1330-20-7	Xylene	0.5-1.5
100-41-4	Ethylbenzene	0.1-1

Section 4 - FIRST AID MEASURES

Description of Necessary Measures

If exposed or concerned: Call a POISON CENTER or doctor/physician.

Inhalation

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Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

Skin

Remove contaminated clothing and wash it before reuse. Rinse skin with water/shower. If skin irritation or rash occurs, seek medical advice/attention.

Eyes

Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Most Important Symptoms/Effects

Acute

May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause allergic skin reaction. Causes damage to central nervous system, kidneys, liver, and respiratory system. May cause drowsiness or dizziness.

Delayed

Suspected of causing cancer. May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure: central nervous system, respiratory system, blood, liver.

Note to Physicians

Contains: toluene, heptane.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Dry chemical, foam or carbon dioxide. Water may be ineffective.

Unsuitable Extinguishing Media

Do not use high-pressure water streams.

Special Hazards Arising from the Chemical

Highly flammable liquid and vapor. Vapors are heavier than air and may travel a considerable distance to a source of ignition and flashback.

Hazardous Combustion Products

Oxides of carbon, oxides of nitrogen

Advice for firefighters

Keep away from heat/sparks/open flame/hot surfaces - No smoking. Ground/bond container and receiving equipment. Take action to prevent static discharges.

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Fire Fighting Measures

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up

Remove all sources of ignition. Avoid breathing vapors. Ventilate affected area. Absorb with earth, sand or other non-combustible material and transfer to container. Dike for later disposal. Dispose in accordance with all applicable regulations.

Environmental Precautions

Avoid release to the environment.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep container tightly closed. Keep away from heat, sparks, open flame, and hot surfaces - No smoking. Ground/bond container and receiving equipment. Use explosion-proof equipment. Take precautionary measures against static discharge. Use non-sparking tools. Use only outdoors or in a well-ventilated area. Vapors will travel. Prevent vapors from entering buildings through open windows or ventilation systems. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. KEEP OUT OF REACH OF CHILDREN.

Conditions for Safe Storage, Including any Incompatibilities

Store in a well-ventilated place. Keep container tightly closed
Keep cool. Store locked up .Keep away from heat and ignition sources. Do not cut, puncture, or weld on or near this container. Empty containers may contain product residue.

Incompatible Materials

Acids, bases, strong oxidizing agents

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Styrene butadiene polymer	Mixture
NIOSH:	10 mg/m ³ TWA total dust; 5 mg/m ³ TWA respirable dust

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OSHA (US):	15 mg/m ³ TWA total dust; 5 mg/m ³ TWA respirable fraction	
Mexico:	10 mg/m ³ TWA LMPE-PPT	20 mg/m ³ STEL [LMPE-CT]
Magnesium oxide	1309-48-4	
ACGIH:	10 mg/m ³ TWA inhalable fraction	
NIOSH:	750 mg/m ³ IDLH fume	
OSHA (US):	15 mg/m ³ TWA fume, total particulate	
Mexico:	10 mg/m ³ TWA LMPE-PPT as Mg fume	
Zinc oxide	1314-13-2	
ACGIH:	2 mg/m ³ TWA respirable fraction	10 mg/m ³ STEL respirable fraction
NIOSH:	5 mg/m ³ TWA dust and fume	10 mg/m ³ STEL fume
	15 mg/m ³ Ceiling dust	500 mg/m ³ IDLH
OSHA (US):	5 mg/m ³ TWA fume; 15 mg/m ³ TWA total dust; 5 mg/m ³ TWA respirable fraction	
Mexico:	5 mg/m ³ TWA LMPE-PPT fume; 10 mg/m ³ TWA LMPE-PPT dust	
	10 mg/m ³ STEL [LMPE-CT] fume	
Toluene	108-88-3	
ACGIH:	20 ppm TWA	
NIOSH:	100 ppm TWA; 375 mg/m ³ TWA	150 ppm STEL; 560 mg/m ³ STEL
	500 ppm IDLH	
Europe:	50 ppm TWA; 192 mg/m ³ TWA	100 ppm STEL; 384 mg/m ³ STEL
	Possibility of significant uptake through the skin	
OSHA (US):	200 ppm TWA	300 ppm Ceiling
Mexico:	50 ppm TWA LMPE-PPT; 188 mg/m ³ TWA LMPE-PPT	
	Skin - potential for cutaneous absorption	

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Acetone	67-64-1	
ACGIH:	250 ppm TWA	500 ppm STEL
NIOSH:	250 ppm TWA; 590 mg/m ³ TWA	2500 ppm IDLH (10% LEL)
Europe:	500 ppm TWA; 1210 mg/m ³ TWA	
OSHA (US):	1000 ppm TWA; 2400 mg/m ³ TWA	
Mexico:	1000 ppm TWA LMPE-PPT; 2400 mg/m ³ TWA LMPE-PPT	
	1260 ppm STEL [LMPE-CT]; 3000 mg/m ³ STEL [LMPE-CT]	
Xylene	1330-20-7	
ACGIH:	100 ppm TWA	150 ppm STEL
Europe:	50 ppm TWA (pure); 221 mg/m ³ TWA (pure)	100 ppm STEL (pure); 442 mg/m ³ STEL (pure)
	Possibility of significant uptake through the skin	
OSHA (US):	100 ppm TWA; 435 mg/m ³ TWA	
Mexico:	100 ppm TWA LMPE-PPT; 435 mg/m ³ TWA LMPE-PPT	
	150 ppm STEL [LMPE-CT]; 655 mg/m ³ STEL [LMPE-CT]	
Ethylbenzene	100-41-4	
ACGIH:	20 ppm TWA	
NIOSH:	100 ppm TWA; 435 mg/m ³ TWA	125 ppm STEL; 545 mg/m ³ STEL
	800 ppm IDLH (10% LEL)	
Europe:	100 ppm TWA; 442 mg/m ³ TWA	200 ppm STEL; 884 mg/m ³ STEL
	Possibility of significant uptake through the skin	
OSHA (US):	100 ppm TWA; 435 mg/m ³ TWA	
Mexico:	100 ppm TWA LMPE-PPT; 435 mg/m ³ TWA LMPE-PPT	
	125 ppm STEL [LMPE-CT]; 545 mg/m ³ STEL [LMPE-CT]	

Biological limit value

There are no biological limit values for any of this product's components.

Engineering Controls

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

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Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear chemical safety goggles with a faceshield to protect against skin and eye contact when appropriate.

Skin Protection

Wear work clothes with long sleeves. Wear protective shoes.

Respiratory Protection

A NIOSH approved air-purifying respirator with an appropriate cartridge or canister may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	yellowish liquid	Physical State	liquid
Odor	hydrocarbon	Color	yellowish
Odor Threshold	Not available	pH	Not available
Melting Point	-95 - -47 °C (-139--53 °F)	Boiling Point	56 - 137 °C (133-279 °F)
Freezing point	Not available	Evaporation Rate	3.2
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	230 °C (475 °F)	Flash Point	-20 °C (-4 °F)
Lower Explosive Limit	1 %	Decomposition	Not available
Upper Explosive Limit	12.8 %	Vapor Pressure	54.1 mmHg
Vapor Density (air=1)	3.2	Specific Gravity (water=1)	Not available
Water Solubility	Negligible	Partition coefficient: n-octanol/water	Not available
Viscosity	2500 cps	Solubility (Other)	Hydrocarbons
Density	0.849 (relative)	VOC	670 g/L

Other Information

No additional information available.

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable under normal conditions of use.

Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

Incompatible Materials

Acids, bases, strong oxidizing agents

Hazardous decomposition products

Oxides of carbon, oxides of nitrogen

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure**Inhalation**

May cause drowsiness or dizziness. May cause respiratory irritation.

Skin Contact

Causes skin irritation. May cause allergic skin reaction.

Eye Contact

Causes serious eye irritation.

Ingestion

May be fatal if swallowed and enters airways. May cause gastrointestinal irritation.

Acute and Chronic Toxicity**Component Analysis - LD50/LC50**

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Polychloroprene (Mixture)

Oral LD50 Rat 20000 mg/kg

Styrene butadiene polymer (Mixture)

Oral LD50 Rat 6450 mg/kg

Chlorinated polypropylene (Mixture)

Oral LD50 Rat 5000 mg/kg

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Polyphenol antioxidant (Trade Secret)

Oral LD50 Rat >5000 mg/kg

Dermal LD50 Rabbit >5000 mg/kg

Inhalation LC50 Rat >165 mg/L 1 h

Magnesium oxide (1309-48-4)

Oral LD50 Rat >5000 mg/kg

Zinc oxide (1314-13-2)

Oral LD50 Rat >15000 mg/kg

Inhalation LC50 Rat >5.7 mg/L

Toluene (108-88-3)

Oral LD50 Rat >7000 mg/kg

Dermal LD50 Rabbit 12 - 14 g/kg

Inhalation LC50 Rat 30 - 35 mg/L

Solvent naphtha, petroleum, light aliphatic (64742-89-8)

Oral LD50 Rat >2000 mg/kg

Dermal LD50 Rat >2000 mg/kg

Inhalation LC50 Rat >5000 ppm 1 hr

Acetone (67-64-1)

Oral LD50 Rat 5800 mg/kg

Dermal LD50 Guinea pig >7246 mg/kg

Inhalation LC50 Rat 32000 ppm 4 h

Xylene (1330-20-7)

Oral LD50 Rat 4300 mg/kg

Dermal LD50 Rabbit >2000 mg/kg

Inhalation LC50 Rat 29.08 mg/L 4 h

Ethylbenzene (100-41-4)

Oral LD50 Rat 3500 mg/kg

Dermal LD50 Rabbit 15400 mg/kg

Inhalation LC50 Rat 4000 ppm 4 hr

Immediate Effects

May be fatal if swallowed and enters airways. Cause skin irritation. Causes serious eye irritation. May cause allergic skin reaction. Causes damage to central nervous system, kidneys, liver, and respiratory system. May cause drowsiness or dizziness.

Delayed Effects

Suspected of causing cancer. May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure: central nervous system, respiratory system, blood, liver.

Irritation/Corrosivity Data

Causes skin irritation. Causes serious eye irritation.

Respiratory Sensitization

No data available.

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Dermal Sensitization

May cause allergic skin reaction.

Component Carcinogenicity

Polychloroprene	Mixture
IARC:	Supplement 7 [1987]; Monograph 19 [1979] (Group 3 (not classifiable))
Magnesium oxide	1309-48-4
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
Toluene	108-88-3
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))
Acetone	67-64-1
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
Xylene	1330-20-7
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))
Ethylbenzene	100-41-4
ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC:	Monograph 77 [2000] (Group 2B (possibly carcinogenic to humans))
DFG:	Category 4 (no significant contribution to human cancer)
OSHA:	Present

Germ Cell Mutagenicity

No data available.

Reproductive Toxicity

May damage fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure

central nervous system, liver, respiratory system, kidneys

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Specific Target Organ Toxicity - Repeated Exposure

central nervous system, liver, respiratory system, blood

Aspiration hazard

May be fatal if swallowed and enters airways.

Medical Conditions Aggravated by Exposure

May cause allergic skin reaction. Aspiration into the lungs may cause chemical pneumonitis.

Additional Data

No additional information available.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

Avoid release to the environment.

Component Analysis - Aquatic Toxicity

Polyphenol antioxidant	Trade Secret
Fish:	LC50 96 h Oncorhynchus mykiss >0.2 mg/L [semi-static]
Algae:	EC50 72 h Pseudokirchneriella subcapitata >0.2 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna >0.2 mg/L IUCLID
Toluene	108-88-3
Fish:	LC50 96 h Pimephales promelas 15.22 - 19.05 mg/L [flow-through] (1 day old); LC50 96 h Pimephales promelas 12.6 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.89 - 7.81 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 14.1 - 17.16 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.8 mg/L [semi-static]; LC50 96 h Lepomis macrochirus 11 - 15 mg/L [static]; LC50 96 h Oryzias latipes 54 mg/L [static]; LC50 96 h Poecilia reticulata 28.2 mg/L [semi-static]; LC50 96 h Poecilia reticulata 50.87 - 70.34 mg/L [static]
Algae:	EC50 96 h Pseudokirchneriella subcapitata >433 mg/L IUCLID; EC50 72 h Pseudokirchneriella subcapitata 12.5 mg/L [static] EPA
Invertebrate:	EC50 48 h Daphnia magna 5.46 - 9.83 mg/L [static] EPA; EC50 48 h Daphnia magna 11.5 mg/L IUCLID
Solvent naphtha, petroleum, light aliphatic	64742-89-8

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Algae:	EC50 72 h Pseudokirchneriella subcapitata 4700 mg/L IUCLID
Acetone	67-64-1
Fish:	LC50 96 h Oncorhynchus mykiss 4.74 - 6.33 mg/L; LC50 96 h Pimephales promelas 6210 - 8120 mg/L [static]; LC50 96 h Lepomis macrochirus 8300 mg/L
Invertebrate:	EC50 48 h Daphnia magna 10294 - 17704 mg/L [static] EPA; EC50 48 h Daphnia magna 12600 - 12700 mg/L IUCLID
Xylene	1330-20-7
Fish:	LC50 96 h Pimephales promelas 13.4 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 2.661 - 4.093 mg/L [static]; LC50 96 h Oncorhynchus mykiss 13.5 - 17.3 mg/L; LC50 96 h Lepomis macrochirus 13.1 - 16.5 mg/L [flow-through]; LC50 96 h Lepomis macrochirus 19 mg/L; LC50 96 h Lepomis macrochirus 7.711 - 9.591 mg/L [static]; LC50 96 h Pimephales promelas 23.53 - 29.97 mg/L [static]; LC50 96 h Cyprinus carpio 780 mg/L [semi-static]; LC50 96 h Cyprinus carpio >780 mg/L; LC50 96 h Poecilia reticulata 30.26 - 40.75 mg/L [static]
Invertebrate:	EC50 48 h water flea 3.82 mg/L; LC50 48 h Gammarus lacustris 0.6 mg/L
Ethylbenzene	100-41-4
Fish:	LC50 96 h Oncorhynchus mykiss 11 - 18 mg/L [static]; LC50 96 h Oncorhynchus mykiss 4.2 mg/L [semi-static]; LC50 96 h Pimephales promelas 7.55 - 11 mg/L [flow-through]; LC50 96 h Lepomis macrochirus 32 mg/L [static]; LC50 96 h Pimephales promelas 9.1 - 15.6 mg/L [static]; LC50 96 h Poecilia reticulata 9.6 mg/L [static]
Algae:	EC50 72 h Pseudokirchneriella subcapitata 4.6 mg/L IUCLID; EC50 96 h Pseudokirchneriella subcapitata >438 mg/L IUCLID; EC50 72 h Pseudokirchneriella subcapitata 2.6 - 11.3 mg/L [static] EPA; EC50 96 h Pseudokirchneriella subcapitata 1.7 - 7.6 mg/L [static] EPA
Invertebrate:	EC50 48 h Daphnia magna 1.8 - 2.4 mg/L IUCLID

Persistence and Degradability

No information available for the product.

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Bioaccumulative Potential

No information available for the product.

Mobility

No information available for the product.

Other Toxicity

No additional information available.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

Shipping Name: Adhesives

Hazard Class: 3

UN/NA #: UN1133

Packing Group: II

Required Label(s): 3

Additional information: Special Provisions (172.102): 149, B52, IB2, T4, TP1, TP8

IATA Information:

UN#: UN1133

IMDG Information:

UN#: UN1133

TDG Information:

UN#: UN1133

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Toluene	108-88-3
SARA 313:	1 % de minimis concentration
CERCLA:	1000 lb final RQ; 454 kg final RQ

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Acetone	67-64-1
CERCLA:	5000 lb final RQ; 2270 kg final RQ
Xylene	1330-20-7
SARA 313:	1 % de minimis concentration
CERCLA:	100 lb final RQ; 45.4 kg final RQ
Ethylbenzene	100-41-4
SARA 313:	0.1 % de minimis concentration
CERCLA:	1000 lb final RQ; 454 kg final RQ

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: Yes **Chronic Health:** Yes **Fire:** Yes **Pressure:** No **Reactivity:** No

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Styrene butadiene polymer	Mixture	No	Yes	Yes	Yes	Yes
Magnesium oxide	1309-48-4	Yes	Yes	Yes	Yes	Yes
Zinc oxide	1314-13-2	Yes	Yes	Yes	Yes	Yes
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes
Xylene	1330-20-7	Yes	Yes	Yes	Yes	Yes
Ethylbenzene	100-41-4	Yes	Yes	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer
 WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects

Toluene	108-88-3
Repro/Dev. Tox	developmental toxicity , 1/1/1991
Ethylbenzene	100-41-4
Carc:	carcinogen , 6/11/2004

Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in

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products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

Magnesium oxide	1309-48-4
	1 %
Zinc oxide	1314-13-2
	1 %
Toluene	108-88-3
	1 %
Acetone	67-64-1
	1 %
Ethylbenzene	100-41-4
	0.1 %

Component Analysis - Inventory

Polychloroprene (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Styrene butadiene polymer (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	NSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Chlorinated polypropylene (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

Polyphenol antioxidant (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

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Magnesium oxide (1309-48-4)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Zinc oxide (1314-13-2)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Toluene (108-88-3)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Solvent naphtha, petroleum, light aliphatic (64742-89-8)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes

Acetone (67-64-1)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Xylene (1330-20-7)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Ethylbenzene (100-41-4)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes



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Yellow dye (2481-94-9)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 2* Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 2 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

Revision Date: June 1, 2018

Revision Note: General Update

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other



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Material Name: Sure-Weld TPO Bonding Adhesive

Product #: 302099

companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name: TPO One Part Pourable Sealer

Chemical Family: Mixture

Product Use: Moisture cure sealant.

Restrictions on Use: For industrial use only.

Manufacturer Information

Carlisle SynTec
1285 Ritner Highway
Carlisle, PA 17013
USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (CHEMTREC)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Hazardous classification: Irritant Category 2

GHS Label Elements

Symbol(s)



Signal Word: Warning

Hazard Statement(s)

H315 Causes skin irritation
H317 May cause allergic skin reaction
H318 Causes serious eye damage

Precautionary Statement(s)

P273 Avoid release into the environment
P280 Wear protective gloves/protective clothing/eye protection
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 IF IN EYES: Rinse cautiously with water for several minutes.
P338 Remove contact lenses, if present and easy to do. Continue rinsing.
P501 Dispose of contents/container in accordance with local regulation.

Safety Data Sheet

Material Name: TPO One-Part Pourable Sealer

Product #: 307603

R-Phrases

R38 Irritating to skin.

R41 Risk serious damage to eyes.

R43 May cause sensitization by skin contact.

S-Phrases

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S39 Wear eye/face protection.

Carcinogenity: This product contains no ingredient listed as a carcinogen on California Proposition 65 list.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
1760-24-3	Amino Silane	1-3

Section 4 - FIRST AID MEASURES

Inhalation

An unlikely route of entry. Remove to fresh air. Consult a physician.

Skin

Clean product from affected area with Ethyl alcohol, then wash with soap and water.

Eyes

Flush with large amounts of water for at least 15 minutes. Consult a Physician if ill effects or irritation occurs.

Ingestion

An unlikely route of entry. Consult a physician.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Water, CO2, Dry Chemical, Foam.

Unusual Fire and Explosion Hazards: None

Flashpoint: N/A.

Upper Flammability Limit: N/A

Lower Flammability Limit: N/A



Safety Data Sheet

Material Name: TPO One-Part Pourable Sealer

Product #: 307603

Auto Ignition Temperature: N/A

Sensitivity to Impact: N/A

Sensitivity to Static Discharge: N/A

Hazardous Combustion Products: Thermal decomposition may produce toxic fumes of Carbon Monoxide, Carbon dioxide, Sulfur oxides and Hydrogen sulfide.

Section 6 - ACCIDENTAL RELEASE MEASURES

Handling Precautions: Wear personal protective clothing and equipment, see Section 8. Avoid eye, skin and clothing contact.

Cleanup: Collect spill with absorbent material such as cardboard, allow to cure and place into a container approved for waste disposal.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - HANDLING AND STORAGE

Handling Precautions: Use personal protection recommended in section 8. Avoid eye, skin and clothing contact.

Prevention of Fires and Explosions: Product is not considered flammable under normal conditions, and product is not considered explosive.

Storage Requirements: Store in a cool dry area (this product polymerizes when in contact with moisture.)

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Eye/face protection: Wear safety glasses or goggles to avoid eye contact.

Skin Protection: Wear appropriate work clothing. Wear protective shoes. Recommended material: protective skin cream.

Environmental Exposure Control: No specific controls are needed.

Hand Protection: Wear impervious gloves such as vinyl to minimize contact with skin.

Safety Data Sheet

Material Name: TPO One-Part Pourable Sealer

Product #: 307603

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Paste, mild mint scent	Physical State	Water Solubility: Insoluble
Odor Threshold	N/A	pH	N/A
Melting Point	N/A	Flash Point	N/A
Freezing point	N/A	Flash Point Method	Based on FP of the most volatile component
Autoignition	N/A	Vapor Pressure	<1
Lower Explosive Limit	N/A	Specific Gravity (water=1)	1.39
Upper Explosive Limit	N/A	% Volatile	1.07%
Vapor Density (air=1)	>1	VOC	14.9 g/l
Density	11.59 lbs./gal. (calculated)		

Other Information

No additional information available.

Section 10 - STABILITY AND REACTIVITY

Chemical Stability

Stable under normal conditions of use.

Conditions to Avoid

None Known

Incompatible Materials

None Known

Hazardous decomposition products

Thermal decomposition may produce toxic fumes of Carbon Monoxide (CO) and/or Carbon Dioxide (CO₂)

Section 11 - TOXICOLOGICAL INFORMATION

Amino Silane (Refer to sections 2 and 3)

Oral: LD50 > 2,000 mg/kg. Remark: Very low order of toxicity.

Skin Absorption: LD50 > 2,000 mg/kg. Remark: Very low order of toxicity.

Inhalation: LC50 Not acutely Toxic.

Skin Direct Contact: Slight irritation

Eye Direct Contact: Severe irritation. Remark: Causes corneal injury.

Exposure Limits: Not applicable

Sensitization: No

Reproductive Toxicity: No

Mutagenicity: No

Teratogenicity: No

Synergistic Products: None

Section 12 - ECOLOGICAL INFORMATION

No known applicable information.

Section 13 - DISPOSAL CONSIDERATIONS

If this product as supplied becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. This product becomes a firm synthetic rubber when cured. Please allow to cure before disposal.

Section 14 - TRANSPORT INFORMATION

Special shipping information: None

DOT: Not regulated

TDG: Not available

PIN: Not available

Safety Data Sheet

Material Name: TPO One-Part Pourable Sealer

Product #: 307603

Section 15 - REGULATORY INFORMATION

Rotterdam Convention (PIC) Annex III: listed (Tributyl tin compounds (impurities) <2ppm)

U.S. Regulatory information

OSHA 29 CFR 1910-1200 – Irritant.

TSCA – All components of this product are listed on TSCA Inventory.

CERCLA Reportable Quantity – Not applicable.

SARA Title III:

Section 302 Extremely Hazardous Substances – None.

Section 304 – Not applicable.

Section 311/312 – Immediate (acute) health hazard.

Section 313 – None.

RCRA – Refer to section 13.

California Proposition 65 Carcinogens: This product does not contain any chemicals known by the State of California to cause cancer.

California Proposition 65 Reproductive Toxins: This product does not contain any chemicals known by the State of California to cause reproductive harm.

Canadian WHMIS Classification- D2B

Section 16 - OTHER INFORMATION

HMIG Rating

Health: 1 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

Summary of Changes

Revision Date: June 1, 2018

Revision Note: General Update

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD -



Safety Data Sheet

Material Name: TPO One-Part Pourable Sealer

Product #: 307603

Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

TPO Primer

Chemical Family

Primer, mixture

Restrictions on Use

For industrial use only.

Manufacturer Information

Carlisle SynTec
1285 Ritner Highway
Carlisle, PA 17013 USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (Chemtrec)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Flammable Liquids - Category 2
Skin Corrosion/Irritation - Category 2
Serious Eye Damage/Eye Irritation - Category 2A
Skin Sensitization - Category 1A
Carcinogenicity - Category 2
Specific Target Organ Toxicity - Single Exposure - Category 3

GHS Label Elements**Symbol(s)****Signal Word**

Danger

Hazard Statement(s)

Highly flammable liquid and vapor
Causes skin irritation
Causes serious eye irritation
May cause allergic skin reaction
Suspected of causing cancer
May cause drowsiness or dizziness

Safety Data Sheet

Material Name: TPO Primer

Product #: 310471

Precautionary Statement(s)

Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Keep container tightly closed
Keep away from heat/sparks/open flame/hot surfaces - No smoking
Ground/Bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting equipment
Take precautionary measures against static discharge
Use only non-sparking tools
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapours/spray
Wash thoroughly after handling
Contaminated work clothing must not be allowed out of the workplace

Response

In case of fire: Use appropriate media to extinguish
IF exposed or concerned: Get medical advice/attention
IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER if you feel unwell
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower
If skin irritation or rash occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse
Specific treatment (see label)

Storage

Store in a well-ventilated place. Keep container tightly closed
Keep cool
Store locked up

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
64742-89-8	Solvent naphtha, petroleum, light aliphatic	10-30
Trade Secret	Isophorone Diisocyanate	0.1-1

Safety Data Sheet

Material Name: TPO Primer

Product #: 310471

108-88-3	Toluene	40-70
Trade Secret	Chlorinated polypropylene	0.5-1.5
Trade Secret	Heat reactive phenolic resin	0.1-1
Trade Secret	Isophorondiamine-isobutyraldimine	0.1-1

Section 4 - FIRST AID MEASURES

Description of Necessary Measures

IF exposed or concerned: Get medical advice/attention.

Inhalation

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

Skin

Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention.

Eyes

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion

If swallowed, get medical attention.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Most Important Symptoms/Effects

Acute

Causes skin irritation. Causes serious eye irritation. May cause allergic skin reaction. May cause drowsiness or dizziness.

Delayed

May cause allergic skin reaction. Suspected of causing cancer.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Dry chemical, foam or carbon dioxide. Water may be ineffective.

Unsuitable Extinguishing Media

Do not use high-pressure water streams.

Special Hazards Arising from the Chemical

Safety Data Sheet

Material Name: TPO Primer

Product #: 310471

Highly flammable liquid and vapor.

Hazardous Combustion Products

Carbon monoxide, carbon dioxide, oxides of nitrogen, aldehydes

Fire Fighting Measures

Move container from fire area if it can be done without risk.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up

Remove all sources of ignition. Avoid breathing vapors. Wear self-contained breathing apparatus and protective clothing. Ventilate the area. Use non-sparking tools. Large spills: Dike for later disposal. Cleanup Methods: Absorb with sand or other non-combustible material. Use clean non-sparking tools to collect absorbed material and place it into loosely-covered metal or plastic containers for later disposal. Dispose in accordance with all applicable federal, state/regional and local laws and regulations.

Environmental Precautions

Avoid release to the environment. Collect spillage.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Take precautionary measures against static discharge. Use only non-sparking tools. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapours/spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. KEEP OUT OF REACH OF CHILDREN.

Conditions for Safe Storage, Including any Incompatibilities

Store in a well-ventilated place. Keep container tightly closed

Keep cool

Store locked up

Keep dry. Keep away from heat and ignition sources. Do not puncture or burn containers, even when empty. Empty containers may contain product residue.

Incompatible Materials

Strong oxidizing agents, acids, bases

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Safety Data Sheet

Material Name: TPO Primer

Product #: 310471

Component Exposure Limits

Toluene	108-88-3		
ACGIH:	20 ppm TWA		
NIOSH:	100 ppm TWA; 375 mg/m ³ TWA	150 ppm STEL; 560 mg/m ³ STEL	
	500 ppm IDLH		
Europe:	50 ppm TWA; 192 mg/m ³ TWA	100 ppm STEL; 384 mg/m ³ STEL	
	Possibility of significant uptake through the skin		
OSHA (US):	200 ppm TWA	300 ppm Ceiling	
Mexico:	50 ppm TWA LMPE-PPT; 188 mg/m ³ TWA LMPE-PPT		
	Skin - potential for cutaneous absorption		

Biological limit value

There are no biological limit values for any of this product's components.

Engineering Controls

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin Protection

Wear appropriate chemical resistant clothing. Wear protective shoes.

Respiratory Protection

A NIOSH approved air-purifying respirator with an appropriate cartridge or canister may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	orange to red liquid	Physical State	liquid
Odor	characteristic	Color	orange to red
Odor Threshold	Not available	pH	Not available
Melting Point	-95 °C(-139°F)	Boiling Point	111 - 141 °C(-232 -259°F)
Freezing point	Not available	Evaporation Rate	2.7

Safety Data Sheet

Material Name: TPO Primer

Product #: 310471

Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	500 °C(932°F)	Flash Point	4 °C(40°F)
Lower Explosive Limit	0.9	Decomposition	Not available
Upper Explosive Limit	6.7	Vapor Pressure	19.3 mmHg
Vapor Density (air=1)	3.4	Specific Gravity (water=1)	Not available
Water Solubility	Insoluble	Partition coefficient: n-octanol/water	Not available
Viscosity	<200 cps	Solubility (Other)	Not available
Density	0.75 - 0.81	VOC	645 g/L

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable under normal conditions of use.

Possibility of Hazardous Reactions

Will not polymerize.

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

Incompatible Materials

Strong oxidizing agents, acids, bases

Hazardous decomposition products

Carbon monoxide, carbon dioxide, aldehydes

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

May cause drowsiness or dizziness.

Skin Contact

May cause allergic skin reaction. Causes skin irritation.

Eye Contact

Causes serious eye irritation.

Safety Data Sheet

Material Name: TPO Primer

Product #: 310471

Ingestion

No information on significant adverse effects.

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Solvent naphtha, petroleum, light aliphatic (64742-89-8)

Oral LD50 Rat >2000 mg/kg

Dermal LD50 Rat >2000 mg/kg

Inhalation Rat >5000 ppm 1 hour

Isophorone Diisocyanate (Trade Secret)

Oral LD50 Rat >20000 mg/kg

Dermal LD50 Rabbit 4000 mg/kg

Inhalation LC50 Rat 5 mg/l 4 h

Toluene (108-88-3)

Oral LD50 >7000 mg/kg

Dermal LD50 12 - 14 g/kg

Inhalation LC50 30 - 35 mg/L

Chlorinated polypropylene (Trade Secret)

Oral Rat 5000 mg/kg

Heat reactive phenolic resin (Trade Secret)

Oral LD50 Rat 2160 mg/kg

Dermal Rabbit 1880 mg/kg

Isophorondiamine-isobutyraldimine (Trade Secret)

Oral Rat 4150 mg/kg [OECD Test Guideline 401]

Dermal Rat >5000 mg/kg [OECD Test Guideline 402]

Immediate Effects

Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. May cause allergic skin reaction.

Delayed Effects

May cause allergic skin reaction. Suspected of causing cancer.

Irritation/Corrosivity Data

Causes skin irritation. Causes serious eye irritation.

Respiratory Sensitization

No information available for the product.

Dermal Sensitization

May cause allergic skin reaction.

Component Carcinogenicity

Toluene	108-88-3
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Safety Data Sheet

Material Name: TPO Primer

Product #: 310471

ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

Germ Cell Mutagenicity

No information available for the product.

Tumorigenic Data

No data available

Reproductive Toxicity

No information available for the product.

Specific Target Organ Toxicity - Single Exposure

central nervous system

Specific Target Organ Toxicity - Repeated Exposure

No target organs identified.

Aspiration hazard

No information available for the product.

Medical Conditions Aggravated by Exposure

No data available.

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

Solvent naphtha, petroleum, light aliphatic	64742-89-8
Algae:	EC50 72 h Pseudokirchneriella subcapitata 4700 mg/L IUCLID
Isophorone Diisocyanate	Trade Secret
Fish:	LC50 96 h Oncorhynchus mykiss 9.22 mg/L
Invertebrate:	EC50 48 h Daphnia magna 6.14 mg/L IUCLID
Toluene	108-88-3
Fish:	LC50 96 h Pimephales promelas 15.22 - 19.05 mg/L [flow-through] (1 day old); LC50 96 h Pimephales promelas 12.6 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.89 - 7.81 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 14.1 - 17.16 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.8 mg/L [semi-static]; LC50 96 h Lepomis macrochirus 11 - 15 mg/L [static];

Safety Data Sheet

Material Name: TPO Primer

Product #: 310471

	LC50 96 h Oryzias latipes 54 mg/L [static]; LC50 96 h Poecilia reticulata 28.2 mg/L [semi-static]; LC50 96 h Poecilia reticulata 50.87 - 70.34 mg/L [static]
Algae:	EC50 96 h Pseudokirchneriella subcapitata >433 mg/L IUCLID; EC50 72 h Pseudokirchneriella subcapitata 12.5 mg/L [static] EPA
Invertebrate:	EC50 48 h Daphnia magna 5.46 - 9.83 mg/L [static] EPA; EC50 48 h Daphnia magna 11.5 mg/L IUCLID
Heat reactive phenolic resin	Trade Secret
Fish:	LC50 96 h Pimephales promelas 0.25 mg/L [flow-through]
Algae:	EC50 72 h Desmodesmus subspicatus 1.1 mg/L IUCLID; EC50 96 h Pseudokirchneriella subcapitata 1.9 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 0.07 - 0.12 mg/L [static] EPA

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents/container in accordance with local/regional/national/international regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

Shipping Name:ADHESIVES

Hazard Class: 3

UN/NA #: UN1133

Packing Group: II

Required Label(s): 3

IATA Information:

Shipping Name:ADHESIVES

Hazard Class: 3

UN#: UN1133

Packing Group: II

Required Label(s): 3

TDG Information:

Safety Data Sheet

Material Name: TPO Primer

Product #: 310471

Shipping Name: ADHESIVES

Hazard Class: 3

UN#: UN1133

Packing Group: II

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Toluene	108-88-3
SARA 313:	1 % de minimis concentration
CERCLA:	1000 lb final RQ; 454 kg final RQ
TSCA 12b:	Section 4 , 1 % de minimus concentration (related to Hydrocarbons, C>4)

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: Yes **Chronic Health:** Yes **Fire:** Yes **Pressure:** No **Reactivity:** No

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects

Toluene	108-88-3
Repro/Dev. Tox	developmental toxicity , 1/1/1991

Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

Toluene	108-88-3
	1 %

Component Analysis - Inventory

Solvent naphtha, petroleum, light aliphatic (64742-89-8)

Safety Data Sheet

Material Name: TPO Primer

Product #: 310471

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes

Isophorone Diisocyanate (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes

Toluene (108-88-3)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Chlorinated polypropylene (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

Heat reactive phenolic resin (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Isophorondiamine-isobutyraldimine (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	No	No	Yes	Yes	No

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 3 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Safety Data Sheet

Material Name: TPO Primer

Product #: 310471

Health: 3 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

Revision Date: June 1, 2018

Revision Note: General Update

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:

The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Safety Data Sheet

Material Name: Weathered Membrane Cleaner

Product #: 304066-1 gal - 2/ctn
302074-5 gal

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

Weathered Membrane Cleaner

Chemical Family

cleaner

Product Use

cleaner

Restrictions on Use

For industrial use only

Manufacturer Information

Carlisle SynTec
1285 Ritner Highway
Carlisle, PA 17013 USA
Phone: +1-800-479-6832
Emergency Phone #: +1-800-424-9300 (Chemtrec)

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Flammable Liquids - Category 2

Aspiration Hazard - Category 1

Skin Corrosion/Irritation - Category 2

Specific Target Organ Toxicity - Single Exposure - Category 3

Specific Target Organ Toxicity - Repeated Exposure - Category 1 (lungs, brain, kidneys, nervous system)

GHS Label Elements

Symbol(s)



Signal Word

Danger

Hazard Statement(s)

Highly flammable liquid and vapor

May be fatal if swallowed and enters airways

Causes skin irritation

May cause drowsiness or dizziness

Causes damage to organs through prolonged or repeated exposure

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302074-5 gal

Precautionary Statement(s)

Prevention

Keep container tightly closed
Keep away from heat/sparks/open flame/hot surfaces - No smoking
Ground/Bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting equipment
Take precautionary measures against static discharge
Use only non-sparking tools
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapours/spray
Wash thoroughly after handling
Contaminated work clothing must not be allowed out of the workplace
Do not eat, drink or smoke when using this product

Response

In case of fire: Use appropriate media to extinguish
IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor if you feel unwell
IF SWALLOWED: Immediately call a POISON CENTER
Do NOT induce vomiting
IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse
Specific treatment (see label)

Storage

Store in a well-ventilated place. Keep container tightly closed
Keep cool
Store locked up

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
64742-89-8	Solvent naphtha, petroleum, light aliphatic	60-100

Section 4 - FIRST AID MEASURES

Inhalation

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Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

Skin

Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Eyes

Rinse cautiously with water for 15 minutes. If eye irritation persists: Get medical advice/attention.

Ingestion

Aspiration hazard. Do NOT induce vomiting. If vomiting occurs, keep head lower than hips to help prevent aspiration. If swallowed, get medical attention.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Most Important Symptoms/Effects

Acute

May be fatal if swallowed and enters airways. Causes skin irritation. May cause drowsiness or dizziness.

Delayed

lung damage, brain damage, kidney damage, nervous system damage

Section 5 - FIREFIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Use carbon dioxide, regular dry chemical, regular foam or water.

Unsuitable Extinguishing Media

Do not use high-pressure water streams.

Special Hazards Arising from the Chemical

Highly flammable liquid and vapor. Vapors are heavier than air and may flashback.

Hazardous Combustion Products

toxic gases: carbon monoxide, carbon dioxide.

Firefighting Measures

Move container from fire area if it can be done without risk. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible withdraw from area and let fire burn.

Special Protective Equipment and Precautions for Firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Section 6 - ACCIDENTAL RELEASE MEASURES

Safety Data Sheet

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302074-5 gal**

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up

Remove all sources of ignition. Avoid breathing vapors. Wear self-contained breathing apparatus and protective clothing. Use non-sparking tools and equipment. Flammable liquid: Fire or projection hazard. Vapor-suppressing foam may be used to control vapors. Eliminate all sources of ignition. All equipment used when handling the product must be grounded. Stop leak if possible without personal risk. Do not touch or walk through spilled material. Prevent entry into waterways, sewers, basements, or confined areas. Dike for later disposal. Use non-sparking tools. Large spills: Keep unnecessary people away, isolate hazard area and deny entry. Prevent entry into waterways, sewers, basements, or confined areas. Dike for later disposal. Use water spray jet to minimize or disperse vapors. Runoff may create fire or explosion hazard. Absorb with earth, sand or other non-combustible material and transfer to container. Dispose in accordance with all applicable federal, state/regional and local laws and regulations.

Environmental Precautions

Avoid release to the environment. Collect spillage.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Highly flammable liquid and vapor. Keep container tightly closed. Keep away from heat/sparks/open flame/hot surfaces - No smoking. Ground/Bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Take precautionary measures against static discharge. Use only non-sparking tools. Wear protective gloves/protective clothing/eye protection/face protection. Keep away from incompatible materials. Do not breathe vapor. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Do not eat, drink or smoke when using this product. Do not ingest. **KEEP OUT OF REACH OF CHILDREN.**

Conditions for Safe Storage, Including any Incompatibilities

Store in a well-ventilated place. Keep container tightly closed

Keep cool

Store locked up

Store in accordance with all current regulations and standards. Store in a cool dry place. Keep away from sources of ignition. Ground/Bond container and receiving equipment. Keep away from incompatible materials.

Incompatible Materials

Strong acids, alkalis, oxidizing agents, chlorine, oxygen

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

ACGIH, NIOSH, EU, OSHA (US) and Mexico have not developed exposure limits for any of this product's components

Biological limit value

There are no biological limit values for any of this product's components.

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302074-5 gal**

Engineering Controls

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin Protection

Wear appropriate chemical resistant clothing.

Respiratory Protection

A NIOSH approved air-purifying respirator with an appropriate cartridge or canister may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	clear liquid	Physical State	liquid
Odor	hydrocarbon odor	Color	clear
Odor Threshold	Not available	pH	Not available
Melting Point	Not available	Boiling Point	118 - 150 °C
Freezing point	Not available	Evaporation Rate	1
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	320 °C(608°F)	Flash Point	18 °C(64.4°F)
Lower Explosive Limit	0.9	Decomposition	Not available
Upper Explosive Limit	7	Vapor Pressure	11.5 mmHg
Vapor Density (air=1)	4	Specific Gravity (water=1)	Not available
Water Solubility	negligible	Partition coefficient: n-octanol/water	Not available
Viscosity	Not available	Solubility (Other)	Not available
Density	0.74 - 0.76	VOC	100 %

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.

Chemical Stability



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Stable under normal conditions of use.

Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Keep away from heat/sparks/open flame/hot surfaces - No smoking. Avoid contact with incompatible materials.

Incompatible Materials

Strong acids, alkalies, oxidizing agents, chlorine, oxygen

Hazardous decomposition products

Releases toxic gases: carbon monoxide, carbon dioxide.

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

May cause drowsiness or dizziness.

Skin Contact

Causes skin irritation.

Eye Contact

May cause eye irritation.

Ingestion

May cause irritation of the mouth and throat. May cause central nervous system depression. Aspiration Hazard. May be fatal if swallowed and enters airways.

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Solvent naphtha, petroleum, light aliphatic (64742-89-8)

Oral LD50 Mouse 5000 mg/kg

Dermal LD50 Rabbit 3000 mg/kg

Product Toxicity Data

Product Analysis LD/LC 50 Toxicity Values

Oral LD50:	Rat >2000 mg/kg LD50
Dermal LD50:	Rat 2000 mg/kg
Inhalation LC50:	Rat >5000 ppm 1 hour LD50

Immediate Effects

Causes skin irritation. May cause drowsiness or dizziness.

Delayed Effects



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Lung damage, brain damage, kidney damage, liver damage, nervous system damage

Irritation/Corrosivity Data

Causes skin irritation.

Respiratory Sensitization

No information available for the product.

Dermal Sensitization

No information available for the product.

Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, NTP, DFG or OSHA

Germ Cell Mutagenicity

No information available for the product.

Tumorigenic Data

No data available

Reproductive Toxicity

No information available for the product.

Specific Target Organ Toxicity - Single Exposure

Central nervous system

Specific Target Organ Toxicity - Repeated Exposure

lungs, brain, kidneys, liver, nervous system

Aspiration hazard

Aspiration Hazard. May be fatal if swallowed and enters airways.

Medical Conditions Aggravated by Exposure

Skin disorders, respiratory disorders, liver disorders, kidney disorders, central nervous system disorders

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

Solvent naphtha, petroleum, light aliphatic	64742-89-8
Algae:	EC50 72 h Pseudokirchneriella subcapitata 4700 mg/L IUCLID

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents/container in accordance with local/regional/national/international regulations. Subject to disposal regulations. U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001.

Component Waste Numbers

The U.S. EPA has not published waste numbers for this product's components



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Section 14 - TRANSPORT INFORMATION

US DOT Information:

Shipping Name: Paint Related Material

Hazard Class: 3

UN/NA #: UN1263

Packing Group: II

Required Label(s): 3

Additional information: Special provisions 149, B52, IB2, T4, TP1, TP8

IATA Information:

Shipping Name: Paint Related Material

Hazard Class: 3

UN#: UN1263

Packing Group: II

Required Label(s): 3

TDG Information:

Shipping Name: Paint Related Material

Hazard Class: 3

UN#: UN1263

Packing Group: II

Required Label(s): 3

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: Yes **Chronic Health:** Yes **Fire:** Yes **Pressure:** No **Reactivity:** No

U.S. State Regulations

None of this product's components are listed on the state lists from CA, MA, MN, NJ or PA

Not listed under California Proposition 65

Canadian WHMIS Ingredient Disclosure List (IDL)

The components of this product are either not listed on the IDL or are present below the threshold limit listed on the IDL.

Component Analysis - Inventory

Solvent naphtha, petroleum, light aliphatic (64742-89-8)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes

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Section 16 - OTHER INFORMATION

HMIS Rating

Health: 2* Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 2 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes

Revision Date: January 24, 2019

Revision Note: General Update

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

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302074-5 gal**

that the person receiving it shall make his own determination of the suitability of the material for his particular use.

To: Industry Professionals or whom it may concern

Thank you for your inquiry regarding an SDS for Carlisle Sheeting and accessory products. The following list of Carlisle products are considered to be an "Article" as under normal conditions of use they do not pose a hazard in the work place or to the building occupants. Since these products or "Articles" pose no health hazard under normal conditions of use there is no requirement for an SDS. For technical information on each of these products please refer to the Product Data Sheet (PDS) or Technical Data Bulletin (TDB) published on the Carlisle website at www.carlislesyntec.com

Articles as defined in 29 CFR 1910.1200:

- | | |
|---|-------------------------------------|
| Dens-Deck cover boards | Drylights and associated curbs |
| Securock cover board | FR and Modified base sheets |
| Commercial roofing fasteners and plates | SecurEdge metal edgings and copings |
| Expanded Polystyrene insulations | HP Recovery Board |
| Extruded Polystyrene insulations | Fastening and Termination Bars |

Background Information: OSHA promulgated the Hazard Communication Standard (HCS), also known as the "Right to Know" rule, to ensure that the hazards of all chemicals produced or imported into the U.S. are evaluated, and that information concerning their hazards is transmitted to employers and employees. The standard applies **to all chemicals**, which are known to be present in the workplace in such a manner that employees may be exposed to them **under normal conditions** of use or in a foreseeable emergency. For this reason it is incumbent upon manufacturers to assess whether or not their products present a hazard in the work place. The current definition of "**Article**" in **29 CFR 1910.1200** is provided as follows:

"Article" – (as defined by OSHA in 29 CFR 1910.1200(c)) means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk to employees.

A product or "Article" meeting this criterion is **exempt** from the SDS requirement. OSHA realizes that manufacturers often provide SDSs for reasons other than those of meeting the requirements of the Hazard Communication Standard and that this can cause confusion to downstream users. Carlisle's intent is to eliminate confusion by publishing SDS sheets for the products that workers and end-users really need to operate in a safe environment. Carlisle SynTec Incorporated believes the information contained herein to be very accurate. It is not to be taken as a warranty or representation for which Carlisle SynTec Incorporated assumes any legal responsibility for product liability. This information is offered solely for our customers' consideration, investigation and any necessary verification. Any use of this information or of the sheeting and accessories provided by Carlisle SynTec Incorporated must be determined by the user to be acceptable for their intended purpose and in accordance with the appropriate federal, state or local laws and regulations including 29 CFR in its entirety.

Should you have any further questions or need additional information please contact our Research and Development office at 800-479-6832.