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## Surface Conditioner

### SECTION 1. IDENTIFICATION

**Product Identifier** Surface Conditioner

**Other Means of Identification**

**Recommended Use** Primer for concrete substrates

**Manufacturer / Supplier** American Hydrotech, Inc.

**Emergency Phone No.** CANUTEC, (613) 996 - 6666, 24 hours

**SDS No.** 0123

### SECTION 2. HAZARDS IDENTIFICATION

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%	Other Identifiers
Stoddard solvent	8052-41-3	60-100	
Asphalt (Bitumen) fume	8052-42-4	25-50	

### SECTION 4. FIRST-AID MEASURES

#### First-aid Measures

##### Inhalation

Move to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as collar, tie, belt or waistband. Get medical attention immediately.

##### Skin Contact

For hot asphalt splash, cool affected body part with water immersion or shower. Do not attempt removal of asphalt but split longitudinally if circumferential to avoid tourniquet effect. No attempt should be made to remove firmly adhering bitumen from the skin. Once the bitumen has cooled, it will do no further harm and in fact provide a sterile covering over a burnt area. As healing takes place, the bitumen plaque, the bitumen plaque will detach itself, usually after a few days. For skin soiling without underlying burn, cleanse with mineral oil followed by soap and water. Use olive oil in vicinity of eyes.

##### Eye Contact

If a contact lens is present, DO NOT delay flushing or attempt to remove the lens. Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Get medical attention immediately.

##### Ingestion

Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately. Call a Poison Centre or doctor if you feel unwell or are concerned.

#### Most Important Symptoms and Effects, Acute and Delayed

If in eyes:

Symptoms include sore, red eyes, and tearing.

If swallowed:

Symptoms may include nausea, vomiting, stomach cramps and diarrhea.

#### **Immediate Medical Attention and Special Treatment**

##### **Special Instructions**

No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

## **SECTION 5. FIRE-FIGHTING MEASURES**

### **Extinguishing Media**

#### **Suitable Extinguishing Media**

Carbon dioxide, dry chemical powder or appropriate foam.

#### **Unsuitable Extinguishing Media**

Do not spray water onto burning product as this may cause spattering and spreading of the flame.

### **Specific Hazards Arising from the Chemical**

Flammable liquid and vapour. Can ignite at room temperature. Releases vapour that can form explosive mixture with air. Can be ignited by static discharge. See Section 9 (Physical and Chemical Properties) for flash point and explosive limits. Vapours may travel considerable distances to ignition sources and cause a flash fire. Cool containing vessels with water jet in order to prevent pressure build-up, auto-ignition or explosion.

This material is not sensitive to mechanical impact. This material is sensitive to static discharge at temperatures above the flash point.

### **Special Protective Equipment and Precautions for Fire-fighters**

Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary. See Skin Protection in Section 8 (Exposure Controls/Personal Protection) for advice on suitable chemical protective materials.

## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

### **Personal Precautions, Protective Equipment, and Emergency Procedures**

No action shall be taken involving any personal risk or without suitable training. Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Do not touch damaged containers or spilled product unless wearing appropriate protective equipment. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Use the personal protective equipment recommended in Section 8 of this safety data sheet. Monitor area for flammable or explosive atmosphere.

### **Environmental Precautions**

It is good practice to prevent releases into the environment. Do not allow into any sewer, on the ground or into any waterway. If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas. Minimize the use of water to prevent environmental contamination. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### **Methods and Materials for Containment and Cleaning Up**

Small spills or leaks: stop or reduce leak if safe to do so. Contain and soak up spill with absorbent that does not react with spilled product. Do not use absorbents. Contain spill using noncombustible material such as vermiculite, earth or sand. Do NOT use combustible materials such as sawdust. Cover the spill surface with the appropriate type of foam to reduce the release of vapour. Place used absorbent into suitable, covered, labelled containers for disposal.

Contaminated absorbent poses the same hazard as the spilled product. Large spills or leaks: dike spilled product to prevent runoff. Knock down gas with fog or fine water spray. Knock down vapour with fog or fine water spray. Do not direct water at spill or source. Remove or recover liquid using pumps or vacuum equipment. Flush spill area. Dike and recover contaminated water for appropriate disposal. Avoid generating dust. Avoid dry sweeping. If necessary, use a dust suppressant such as water. Do not use compressed air for clean-up. Use water fog or spray curtain to reduce amount of dust in air. Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal. Get expert advice before treating the spilled product with other chemicals to make it less hazardous. Store recovered product in suitable containers that are: covered, tightly-covered. Review Section 13 (Disposal Considerations) of this safety data sheet. Contact emergency services and manufacturer/supplier for advice.

## SECTION 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Only use where there is adequate ventilation. Avoid generating vapours or mists. Avoid generating dusts. Prevent uncontrolled release of product. Immediately report leaks, spills or failures of the safety equipment (e.g. ventilation system). In the event of a spill or leak, exit the area immediately. Eliminate heat and ignition sources such as sparks, open flames, hot surfaces and static discharge. Post "No Smoking" signs. Do not use near welding operations or other high energy sources. Avoid heating that will increase the amount of vapours. Do not weld, cut or perform hot work on empty container until all traces of product have been removed. Good housekeeping is extremely important. Prevent dust accumulation on ALL surfaces including ceiling rafters and other hidden surfaces. Do not use compressed air to clean equipment, clothing or spills. Electrically bond and ground equipment. Ground clips must contact bare metal. Increase conductivity by reducing flowrate in transfer operations and/or handle at lower temperature. Prevent accidental contact with incompatible chemicals. Avoid ALL unprotected contact with this product or with contaminated equipment/surfaces. Wear personal protective equipment to avoid direct contact with this chemical. Avoid repeated or prolonged skin contact with product or with contaminated equipment/surfaces. Prevent contamination of surfaces that unprotected personnel may use. Keep dry. Prevent exposure to water and humidity. Handle under inert gas atmosphere in dry equipment. Prevent any accidental contact with water in handling and storage areas. Avoid shock, friction or impact. Do not skid, drag or drop containers. Do not chip or grind lumps. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Keep in an original container or an approved alternative made from a compatible material, kept tightly closed when in use. Empty containers retain product residue and can be hazardous. Do not reuse container. During storage, transit and cooling of asphalt, solvent vapour and hydrogen sulphide may accumulate in enclosed spaces such as tank cars. Open tank car hatches with caution. Maintain same precautions when gauging and sampling. Do NOT smoke in work areas. Do NOT eat, drink or store food in work areas. Remove contaminated clothing and protective equipment before entering eating areas or leaving work area. Wash hands thoroughly after handling this material.

### Conditions for Safe Storage

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. Engineering controls are usually required in the storage area to protect against the product's hazard(s). Review Section 8 (Exposure Controls/Personal Protection) for information. See advice on temperature in Conditions to Avoid in Section 10 (Stability and Reactivity) to determine suitable storage temperature. Electrically bond and ground containers. Ground clips must contact bare metal. Avoid bulk storage indoors. Do not handle swollen drums. Get expert advice. Empty containers may contain hazardous residue. Store separately. Keep closed. Follow all precautions given on this safety data sheet. Comply with all applicable health and safety regulations, fire and building codes.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Asphalt (Bitumen) fume	0.5 mg/m3 (I) A4 BEI		Not established			
Stoddard solvent	100 ppm		100 ppm			

### Appropriate Engineering Controls

Use only with adequate ventilation. Exhaust ventilation/engineering controls need to keep vapor and gas concentrations below recommended limits and below any lower explosive limits.

### Individual Protection Measures

#### Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

#### Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

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Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Suitable materials are: nitrile rubber.

#### **Respiratory Protection**

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: organic vapour filter cartridge or canister with a dust, fume or mist filter (R, or P series) may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited.

## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

### **Basic Physical and Chemical Properties**

<b>Appearance</b>	Dark black.
<b>Odour</b>	Characteristic asphaltic odour or "rotten egg" odour if H <sub>2</sub> S present, but odour is an unreliable warning, since it may deaden the sense of smell.
<b>Odour Threshold</b>	Not available
<b>pH</b>	Not available
<b>Melting Point/Freezing Point</b>	Not available (melting); Not applicable (freezing)
<b>Initial Boiling Point/Range</b>	160 °C (320 °F)
<b>Flash Point</b>	10 °C (50 °F) (closed cup)
<b>Evaporation Rate</b>	Not available
<b>Upper/Lower Flammability or Explosive Limit</b>	6% (upper); 0.8% (lower)
<b>Vapour Pressure</b>	10 kPa (75 mm Hg) at 20 °C
<b>Vapour Density (air = 1)</b>	3 - 4
<b>Relative Density (water = 1)</b>	0.938
<b>Solubility</b>	Insoluble in water
<b>Partition Coefficient, n-Octanol/Water (Log K<sub>ow</sub>)</b>	Not available
<b>Auto-ignition Temperature</b>	Not available
<b>Viscosity</b>	Not available (kinematic)
<b>Other Information</b>	
<b>Physical State</b>	Liquid
<b>Bulk Density</b>	Not available

## **SECTION 10. STABILITY AND REACTIVITY**

### **Chemical Stability**

Stable under normal storage conditions.

### **Possibility of Hazardous Reactions**

Hazardous polymerizations does not occur.

### **Conditions to Avoid**

Open flames, sparks, static discharge, heat and other ignition sources. Incompatible materials. Exposure to heat.

### **Incompatible Materials**

Acids. Bases. Oxidizers.

### **Hazardous Decomposition Products**

Not available.

## **SECTION 11. TOXICOLOGICAL INFORMATION**

Product Identifier: Surface Conditioner

Date of Preparation:

**Likely Routes of Exposure**

Eye contact; skin contact; inhalation; ingestion; skin absorption.

**Acute Toxicity**

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Asphalt (Bitumen) fume		> 5000 mg/kg (rat)	> 2000 mg/kg (rabbit)
Stoddard solvent	> 1300 ppm (rat) (4-hour exposure)	> 5000 mg/kg (rat)	> 3000 mg/kg (rabbit)

**Skin Corrosion/Irritation**

Irritating to skin. Signs/symptoms may include localized redness, swelling, and itching. Hot liquid product may cause serious thermal burns on direct contact. Asphalt fumes can increase susceptibility to sunburn.

**Serious Eye Damage/Irritation**

Irritating to eyes. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision. Hot liquid product may cause serious thermal burns on direct contact. Hydrogen sulphide may cause eye irritation at 1 - 20 ppm and acute conjunctivitis at higher concentrations. Above 50 ppm H<sub>2</sub>S, eye irritation may include symptoms of redness, sever swelling, tearing, sensitivity to light and the appearance of 'Halos' around lights.

EYE IRRITANT. Symptoms include sore, red eyes, and tearing. Hot liquid product may cause thermal burns.

**STOT (Specific Target Organ Toxicity) - Single Exposure****Inhalation**

No information was located.

Inhalation of this product may cause respiratory tract irritation and Central Nervous System (CNS) Depression, symptoms of which may include weakness, dizziness, slurred speech, drowsiness, unconsciousness and in cases of severe overexposure; coma and death. At higher concentrations (above 10 ppm), hydrogen sulphide is extremely toxic by inhalation, may cause respiratory-tract irritation and respiratory failure, coma and death. Pulmonary edema can occur up to 24 hours after hydrogen sulphide exposure. While hydrogen sulphide emits a strong odour of rotten eggs, detection by smell is not sufficient as a warning property for exposure to this substance, as it may deaden the sense of smell quickly.

**Ingestion**

Symptoms may include nausea, vomiting, stomach cramps and diarrhea.

**STOT (Specific Target Organ Toxicity) - Repeated Exposure**

Prolonged or repeated contact may dry skin and cause irritation. Exposure to Naphtha may damage the blood-forming organs resulting in fatigue and anemia (RBC), decreased resistance to infection, and/or excessive bruising and bleeding (platelet effect). Peripheral nerve damage may be evidence by impairment to motor function (incoordination, unsteady walk, or muscle weakness in the extremities, and/or loss of sensation in the arms and legs). Auditory system effects may include temporary hearing loss and/or ringing in the ears. This product contains small quantities of Polycyclic aromatic hydrocarbons. Prolonged contact with these compounds has been associated with the induction of skin and lung tumors, anemia, disorders of the liver, bone marrow and lymphoid tissues. Long term inhalation of Benzene or Xylene vapours can result in bone marrow abnormalities with damage to blood forming tissues and may cause anemia and other blood cell abnormalities. Immunodepressive effects have also been reported. Hydrogen sulphide may reduce lung function; cause neurological effects such as headaches, nausea, depression and personality changes; eye and mucous membrane irritation: damage to cardiovascular system.

Although the material in general is not considered to have chronic effects, it may contain benzene, a listed carcinogen. Refer to Section 11 of the MSDS for more detailed information.

**Carcinogenicity**

Chemical Name	IARC	ACGIH®	NTP	OSHA
Asphalt (Bitumen) fume	Group 2B	A4		

IARC: The International Agency for Research on Cancer (IARC) has determined that occupational exposures to oxide asphalt and their emissions during roofing operations are "probably carcinogenic to humans" (Group A). IARC concluded that occupational exposures to hard asphalt and their emissions during mastic asphalt work are "possibly carcinogenic to humans" (Group 2B). IARC concluded that occupational exposure to straight-run asphalt and their emissions during paving operations are "possibly carcinogenic to humans" (Group 2B).

An IARC working group has concluded that occupational exposures to straight-run bitumens and their emissions during road paving are 'possibly carcinogenic to humans' (Group 2B).

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## Reproductive Toxicity

### Development of Offspring

Birth defects. Studies in people show effects on the unborn child.

The material in general is not expected to have toxic reproductive effects.

### Sexual Function and Fertility

Animal studies show effects on sexual function and/or fertility. (Benzene). (Xylene (mixed isomers)) studies in people and animals show effects on sexual function and/or fertility. Effects on the menstrual cycle.

No known significant effects or critical hazards.

## Germ Cell Mutagenicity

Causes mutagenicity in in vitro tests. Hazardous by OSHA/WHMIS criteria. May cause heritable genetic damage.

The material in general is not expected to produce mutagenic effects.

## Interactive Effects

Not available.

Not available

## SECTION 12. ECOLOGICAL INFORMATION

### Toxicity

Marine Pollutant.

### Persistence and Degradability

No information was located.

### Bioaccumulative Potential

No information was located.

### Mobility in Soil

Studies are not available.

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal Methods

Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction. The required hazard evaluation of the waste and compliance with the applicable hazardous waste laws are the responsibility of the user. This product and its container must be disposed of as hazardous waste. Do NOT dump into any sewers, on the ground or into any body of water.

## SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
Canadian TDG	1999	Waterproofing Primer (Tars, Liquid, including road asphalt and oils, bitumen and cutbacks)	3	II
US DOT	1999	Waterproofing Primer (Tars, Liquid, including road asphalt and oils, bitumen and cutbacks)	3	II

**Special Precautions for User** Please note: PG\*: Packing group

**Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

## SECTION 15. REGULATORY INFORMATION

### Safety, Health and Environmental Regulations

#### Canada

##### WHMIS Classification

Product Identifier: Surface Conditioner

Date of Preparation:





Class B2



Class D2B

B2 - Flammable Liquid; D2B - Toxic (Skin irritant; Eye irritant)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by the Controlled Products Regulations.

## USA

### US OSHA HazCom 1994 Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200 (1994)).

### Additional USA Regulatory Lists

SARA Title III - Section 302: Not listed SARA Title III - Section 304 EHS RQ (lbs.) Not listed SARA Title III - Section 313: Not listed CERCLA: Not listed RCRA CODE Not listed CAA 112(r) TQ (lbs.) Not listed.

## SECTION 16. OTHER INFORMATION

<b>NFPA Rating</b>	<b>Health - 2</b>	<b>Flammability - 3</b>	<b>Instability - 0</b>
	<b>Based on</b> Naphtha (petroleum), hydro treated heavy		
<b>SDS Prepared By</b>	EPC & Risk Management Department		
<b>Phone No.</b>	1 (416) 281 - 8181		
<b>Key to Abbreviations</b>	ACGIH® = American Conference of Governmental Industrial Hygienists AIHA = American Industrial Hygiene Association HSDB® = Hazardous Substances Data Bank IARC = International Agency for Research on Cancer NFPA = National Fire Prevention Association NIOSH = National Institute for Occupational Safety and Health NTP = National Toxicology Program OSHA = US Occupational Safety and Health Administration RTECS® = Registry of Toxic Effects of Chemical Substances		
<b>References</b>	CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). HSDB® database. US National Library of Medicine. Available from Canadian Centre for Occupational Health and Safety (CCOHS). NIOSH Pocket Guide database. National Institute for Occupational Safety and Health. Available from Canadian Centre for Occupational Health and Safety (CCOHS). Registry of Toxic Effects of Chemical Substances (RTECS®) database. Accelrys, Inc. Available from Canadian Centre for Occupational Health and Safety (CCOHS).		
<b>Disclaimer</b>	To the best of our knowledge, the information herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.		

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



# Monolithic Membrane 6125®

## Safety Data Sheet

Date of issue: 11/01/2017

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture  
Trade name : Monolithic Membrane 6125® (MM6125®)

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### 1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial  
For professional use only  
Use of the substance/mixture : Hot-applied, rubberized asphalt membrane for waterproofing, roofs, terraces, foundation walls, parking decks and bridges.

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

##### Manufacturer/Supplier

Hydrotech Membrane Corporation  
10951 Parkway  
H1J 1S1 Anjou (Québec) - Canada  
T 1-514-353-6000  
[info@hydrotechmembrane.ca](mailto:info@hydrotechmembrane.ca) - [www.hydrotechmembrane.ca](http://www.hydrotechmembrane.ca)

#### 1.4. Emergency telephone number

Emergency number : CANUTEC (Canada 24 hours): 1-888-CAN-UTEC (226-8832) or (613) 996-6666  
CHEMTREC (USA 24 hours) : 1-800-424-9300  
POISON CONTROL CENTER (QC 24 hours): 1-800-463-5060

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

Not classified

#### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

No labeling applicable

#### 2.3. Other hazards

Other hazards which do not result in classification : The product is solid at room temperature and becomes liquid when treated for the application. If heated at high temperatures, it can release vapors and/or hydrogen sulfide.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable

#### 3.2. Mixture

Name	Product identifier	%	
Asphalt	(CAS No) 8052-42-4 (EC no) 232-490-9	40 - 70	
Lubricating oils, petroleum, hydrotreated spent	(CAS No) 64742-58-1 (EC no) 265-161-3	15 - 40	
Styrene-butadiene copolymer	(CAS No) 9003-55-8 (EC no) 618-370-2	7 - 13	
1,3-Butadiene, 2-methyl-, homopolymer	(CAS No) 9003-31-0 (EC no) 618-362-9	3 - 12	
Carbon black	(CAS No) 1333-86-4 (EC no) 215-609-9	1 - 7	

# Monolithic Membrane 6125®

## Safety Data Sheet

Name	Product identifier	%	
Distillates, petroleum, solvent-refined heavy paraffinic	(CAS No) 64741-88-4 (EC no) 265-090-8	< 2	

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures after inhalation	: Move the affected person away from the contaminated area and into the fresh air. Seek medical attention if ill effect or irritation develops.
First-aid measures after skin contact	: In case of contact with hot or molten product, cool rapidly with water and seek immediate medical attention. Do not attempt to remove molten product from skin because skin will tear easily. Cuts or abrasions should be treated promptly with thorough cleansing of the affected area.
First-aid measures after eye contact	: In case of contact with hot material: Rinse immediately with plenty of water. Seek medical attention immediately.
First-aid measures after ingestion	: Seek medical attention immediately. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a POISON CENTRE or doctor/physician.

#### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation	: At elevated temperatures, product mist or vapours may irritate the mucous membranes of the nose, the throat, bronchi, and lungs. Dizziness, headaches, nausea, unconsciousness. May release poisonous hydrogen sulphide gas.
Symptoms/injuries after skin contact	: At elevated temperatures, the hot liquid may cause severe skin burns. Prolonged or repeated contact with the skin may cause dermatitis.
Symptoms/injuries after eye contact	: At elevated temperatures, hot material can cause burns. Vapour irritates eyes.
Symptoms/injuries after ingestion	: At elevated temperatures, severe irritation or burns to the mouth, throat, oesophagus, and stomach.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Carbon oxides. Nitrogen oxides. Sulphur oxides. Toxic fumes may be released.
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#### 5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. May release poisonous hydrogen sulphide gas.
Protective equipment for firefighters	: Do not enter fire area without proper protective equipment, including respiratory protection.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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##### 6.1.2. For emergency responders

Protective equipment	: Equip clean-up crew with proper protection.
Emergency procedures	: Ventilate area.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Dispose of this material and its container to hazardous or special waste collection point.
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#### 6.4. Reference to other sections

Refer to sections 8 and 13.

# Monolithic Membrane 6125®

## Safety Data Sheet

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. The inherent toxic and olfactory (sense of smell) fatiguing properties of hydrogen sulphide require that air monitoring alarms be used if concentrations are expected to reach harmful levels such as in enclosed spaces, heated transport vessels and spill or leak situations. If the air concentration exceeds 50 ppm, the area should be evacuated unless respiratory protection is in use. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

#### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Incompatible materials. Keep container closed when not in use.

Incompatible materials : Strong bases. Pure oxygen. Chlorine. Strong acids. Strong oxidizers.

#### 7.3. Specific end use(s)

Refer to section 1.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Asphalt (8052-42-4)		
USA - ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup> (fume, inhalable fraction)
USA - ACGIH	Biological Exposure Indices (BEI)	(Medium: urine - Time: end of shift at end of workweek - Parameter: 1-Hydroxypyrene with hydrolysis (non-quantitative))
USA - NIOSH	NIOSH REL (ceiling) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (fume)

Carbon black (1333-86-4)		
USA - ACGIH	Local name	Carbon black
USA - ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
USA - ACGIH	Remark (ACGIH)	Bronchitis
USA - IDLH	US IDLH (mg/m <sup>3</sup> )	1750 mg/m <sup>3</sup>
USA - NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	3.5 mg/m <sup>3</sup> 0.1 mg/m <sup>3</sup> (Carbon black in presence of Polycyclic aromatic hydrocarbons)
USA - OSHA	Local name	Carbon black
USA - OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	3.5 mg/m <sup>3</sup>

#### 8.2. Exposure controls

Appropriate engineering controls : Ensure adequate ventilation, especially in confined areas. When the product is used outdoors, stay well away from building air intakes or close and seal the intake to prevent product from entering building.

Personal protective equipment : Avoid all unnecessary exposure. For certain operations, additional Personal Protection Equipment (PPE) may be required. Personal protective equipment should be selected based upon the conditions under which this product is handled or used. Protective goggles. Protective clothing. Gloves and respiratory protection.



Hand protection : Impervious gloves e.g. PVC, nitrile rubber, butyl rubber. Chemical resistant PVC gloves (to European standard EN 374 or equivalent).

Eye protection : In case of splash hazard: chemical goggles or safety glasses. Wear approved safety goggles. Chemical goggles should be consistent with EN166 or equivalent.

Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. In fine dispersion/spraying/misting: In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazard protection : Eliminate all sources of ignition, avoid sparks, flames and do not smoke in risk area. When handling molten material, thermally-protective long sleeved clothing, boots and gloves should be worn. Face shield and eye protection.

Other information : Do not eat, drink or smoke during use.

# Monolithic Membrane 6125®

## Safety Data Sheet

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid at 205 °C (application temperature) Semi-solid at 25 °C
Colour	: black.
Odour	: characteristic.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 240 °C
Auto-ignition temperature	: 400 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.15 kg/l
Solubility	: Water: 50 ppm
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

#### 9.2. Other information

VOC content	: 0% g/l
-------------	----------

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

The product is stable at normal handling and storage conditions.

#### 10.2. Chemical stability

Stable.

#### 10.3. Possibility of hazardous reactions

None known under normal conditions of use.

#### 10.4. Conditions to avoid

Excessive heat.

#### 10.5. Incompatible materials

Strong bases. Strong acids. Pure oxygen. Chlorine. Strong oxidizers.

#### 10.6. Hazardous decomposition products

Carbon oxides, nitrogen oxides and sulphur oxides. Toxic fumes may be released.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity	: Not classified
----------------	------------------

Asphalt (8052-42-4)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
Distillates, petroleum, solvent-refined heavy paraffinic (64741-88-4)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	2.18 mg/l/4h

# Monolithic Membrane 6125®

## Safety Data Sheet

### Carbon black (1333-86-4)

LD50 oral rat	> 15400 mg/kg
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Causes damage to organs through prolonged or repeated exposure
Aspiration hazard	: May be fatal if swallowed and enters airways.
Potential Adverse human health effects and symptoms	: At application temperature, inhalation may affect the nervous system causing headache, possibly dizziness, nausea, weakness, loss of coordination and unconsciousness. Suspected of causing cancer. The hot liquid may cause skin burns and vapors may irritate to eyes.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : May be toxic to aquatic life.

### Distillates, petroleum, hydrotreated heavy naphthenic (64742-52-5)

LC50 fish 1	> 5000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	> 1000 mg/l (Exposure time: 48 h - Species: Daphnia magna)

### Silicon dioxide (7631-86-9)

LC50 fish 1	5000 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 1	7600 mg/l (Exposure time: 48 h - Species: Ceriodaphnia dubia)
ErC50 (algae)	440 mg/l Pseudokirchneriella subcapitata

### Carbon Black (1333-86-4)

ErC50 (algae)	> 10000 mg/l 72 hours OECD 201
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### 12.2. Persistence and degradability

#### Monolithic Membrane 6125®

Persistence and degradability	Not established.
-------------------------------	------------------

### 12.3. Bioaccumulative potential

#### Monolithic Membrane 6125®

Bioaccumulative potential	Not established.
---------------------------	------------------

#### Asphalt (8052-42-4)

BCF fish 1	(no bioaccumulation expected)
Log Pow	> 6

#### Silicon dioxide (7631-86-9)

BCF fish 1	(no bioaccumulation expected)
------------	-------------------------------

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

Additional information : Avoid release to the environment

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with applicable local, national and international regulation.

Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

UN-No. (ADR) : Not regulated

# Monolithic Membrane 6125®

## Safety Data Sheet

UN-No. (IMDG)	: Not regulated
UN-No. (IATA)	: Not regulated
UN-No. (ADN)	: Not regulated
UN-No. (RID)	: Not regulated

### 14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not regulated
Proper Shipping Name (IMDG)	: Not regulated
Proper Shipping Name (IATA)	: Not regulated
Proper Shipping Name (ADN)	: Not regulated
Proper Shipping Name (RID)	: Not regulated

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR)	: Not regulated
----------------------------------	-----------------

#### IMDG

Transport hazard class(es) (IMDG)	: Not regulated
-----------------------------------	-----------------

#### IATA

Transport hazard class(es) (IATA)	: Not regulated
-----------------------------------	-----------------

#### ADN

Transport hazard class(es) (ADN)	: Not regulated
----------------------------------	-----------------

#### RID

Transport hazard class(es) (RID)	: Not regulated
----------------------------------	-----------------

### 14.4. Packing group

Packing group (ADR)	: Not regulated
Packing group (IMDG)	: Not regulated
Packing group (IATA)	: Not regulated
Packing group (ADN)	: Not regulated
Packing group (RID)	: Not regulated

### 14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

### 14.6. Special precautions for user

#### - Overland transport

Not regulated

#### - Transport by sea

Not regulated

#### - Air transport

Not regulated

#### - Inland waterway transport

Not regulated

#### - Rail transport

Not regulated

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

Not applicable

# Monolithic Membrane 6125®

## Safety Data Sheet

### SECTION 15: Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

VOC content : 0% g/l

#### 15.1.2. National regulations

No additional information available

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

### SECTION 16: Other information

Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Carc. 2	Carcinogenicity, Category 2
Flam. Liq. 2	Flammable liquids Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H225	Highly flammable liquid and vapour
H315	Causes skin irritation
H350	May cause cancer
H351	Suspected of causing cancer
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*



# Safety Data Sheet

Material Name: ABS 3D Printer Filament/ MakerBot ABS

SDS ID: MB-001\_US

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## Section 1 - PRODUCT AND COMPANY IDENTIFICATION

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### Material Name

ABS 3D Printer Filament/ MakerBot ABS

### Synonyms

Acrylonitrile-Butadiene-Styrene Copolymer.

### Chemical Family

polymer, copolymer.

### Product Use

3D Printing

### Restrictions on Use

Do not use in printers where temperatures exceed 250°C.

### Details of the supplier of the safety data sheet

MakerBot Industries LLC

One MetroTech Center

Brooklyn, NY 11201

USA

Emergency Phone #: MakerBot (347) 334-6800

E-mail: Edwin.Meek@makerbot.com

Emergency Poison Control Hot Line : 1 (800) 222-1222

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## 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

# Safety Data Sheet

**Material Name: ABS 3D Printer Filament/ MakerBot ABS**

**SDS ID: MB-001\_US**

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

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## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

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CAS	Component Name	Percent
9003-56-9	ABS resin	> 98
100-42-5	Styrene	< 0.1

---

## Section 4 - FIRST AID MEASURES

---

### Inhalation

Heating may release vapors which may be irritating. In case of inhalation of decomposition products, affected person should be moved into fresh air and kept still. Get medical advice/attention.

### Skin

It is unlikely that first aid will be required. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.

### Eyes

It is unlikely that first aid will be required. Dust may be irritating to the eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention, if needed.

### Ingestion

IF SWALLOWED: Rinse mouth. Get immediate medical advice/attention.

### Indication of any immediate medical attention and special treatment needed

First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. Treat symptomatically and supportively.

### Most Important Symptoms/Effects

#### Acute

Molten material may cause thermal burns.

#### Delayed

No information on significant adverse effects.

### Note to Physicians

Treat symptomatically. Give artificial respiration if not breathing.

### Antidote

None known. Treat symptomatically and supportively.

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## Section 5 - FIRE FIGHTING MEASURES

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### Extinguishing Media

# Safety Data Sheet

**Material Name: ABS 3D Printer Filament/ MakerBot ABS**

**SDS ID: MB-001\_US**

**Suitable Extinguishing Media**

water, foam, regular dry chemical

**Unsuitable Extinguishing Media**

None known

**Special Hazards Arising from the Chemical**

Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

**Hazardous Combustion Products**

oxides of carbon, oxides of nitrogen, HCN, acrylonitrile, styrene monomer.

**Fire Fighting Measures**

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure. Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.

**Special Protective Equipment and Precautions for Firefighters**

Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

---

## Section 6 - ACCIDENTAL RELEASE MEASURES

---

**Personal Precautions, Protective Equipment and Emergency Procedures**

No measures required.

**Methods and Materials for Containment and Cleaning Up**

Collect spilled material in appropriate container for disposal. Dispose in accordance with all applicable regulations.

**Environmental Precautions**

Avoid release to the environment. Comply with all applicable regulations on spill and release reporting. Prevent entry into waterways, sewers, basements, or confined areas.

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## Section 7 - HANDLING AND STORAGE

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**Precautions for Safe Handling**

Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations.

**Conditions for Safe Storage, Including any Incompatibilities**

None needed according to classification criteria.

Store in a cool dry place. Store below 50 C. Avoid heat, flames, sparks and other sources of ignition. Keep away from incompatible materials.

**Incompatible Materials**

Oxidizing agents.

---

# Safety Data Sheet

Material Name: ABS 3D Printer Filament/ MakerBot ABS

SDS ID: MB-001\_US

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### Component Exposure Limits

Styrene	100-42-5
ACGIH:	20 ppm TWA
	40 ppm STEL
NIOSH:	50 ppm TWA; 215 mg/m3 TWA
	100 ppm STEL; 425 mg/m3 STEL
	700 ppm IDLH
OSHA (US):	100 ppm TWA
	200 ppm Ceiling
Mexico:	50 ppm TWA LMPE-PPT; 215 mg/m3 TWA LMPE-PPT
	100 ppm STEL [LMPE-CT]; 425 mg/m3 STEL [LMPE-CT]
	Skin - potential for cutaneous absorption

### EU - Occupational Exposure (98/24/EC) - Binding Biological Limit Values and Health Surveillance Measures

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

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

Styrene (100-42-5)

400 mg/g creatinine Medium: urine Time: end of shift Parameter: Mandelic acid plus phenylglyoxylic acid (nonspecific); 40 µg/L Medium: urine Time: end of shift Parameter: Styrene

### Engineering Controls

Provide local exhaust ventilation system. Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing.

### Individual Protection Measures, such as Personal Protective Equipment

#### Eye/face protection

None during normal use. Protect against molten solid.

#### Skin Protection

None during normal use. Protect against molten solid.

#### Respiratory Protection

No respirator is required under normal conditions of use. If respirable dusts are generated, respiratory protection may be needed.

#### Glove Recommendations

Protect against molten solid. In the molten form, Wear protective gloves.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

## Safety Data Sheet

Material Name: ABS 3D Printer Filament/ MakerBot ABS

SDS ID: MB-001\_US

<b>Appearance</b>	Spool,string,strand	<b>Physical State</b>	solid
<b>Odor</b>	odorless,sweet,plastic	<b>Color</b>	clear,translucent,opaque
<b>Odor Threshold</b>	varies	<b>pH</b>	Not available
<b>Melting Point</b>	Softening above 100 °C	<b>Boiling Point</b>	Not available
<b>Freezing point</b>	Not available	<b>Evaporation Rate</b>	Not available
<b>Boiling Point Range</b>	Not available	<b>Flammability (solid, gas)</b>	Not available
<b>Autoignition</b>	466 °C	<b>Flash Point</b>	404 °C
<b>Lower Explosive Limit</b>	45 g/m <sup>3</sup>	<b>Decomposition</b>	>250 °C
<b>Upper Explosive Limit</b>	Not available	<b>Vapor Pressure</b>	Not available
<b>Vapor Density (air=1)</b>	Not available	<b>Specific Gravity (water=1)</b>	1.03 - 1.1
<b>Water Solubility</b>	Insoluble	<b>Partition coefficient: n-octanol/water</b>	Not available
<b>Viscosity</b>	Not available	<b>Solubility (Other)</b>	Not available
<b>Density</b>	Not available	<b>Molecular Weight</b>	Not available

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### Section 10 - STABILITY AND REACTIVITY

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#### Reactivity

The product is chemically stable under recommended conditions of storage, use and temperature.

#### Chemical Stability

Stable under normal conditions of use.

#### Possibility of Hazardous Reactions

Will not polymerize.

#### Conditions to Avoid

Avoid contact with temperatures above 250 C.

#### Incompatible Materials

Oxidizing agents.

#### Hazardous decomposition products

oxides of carbon, oxides of nitrogen, HCN, acrylonitrile, styrene monomer

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# Safety Data Sheet

Material Name: ABS 3D Printer Filament/ MakerBot ABS

SDS ID: MB-001\_US

## Section 11 - TOXICOLOGICAL INFORMATION

### Information on Likely Routes of Exposure

#### Inhalation

No hazard is expected from the normal use of this product. Dust may cause irritation of the nose, throat and upper respiratory tract.

#### Skin Contact

Molten material may cause burns.

#### Eye Contact

Molten material may cause burns.

#### 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:

Styrene (100-42-5)

Oral LD50 Rat 1000 mg/kg

Inhalation LC50 Rat 11.7 mg/L 4 h

#### Immediate Effects

Molten material may cause thermal burns.

#### Delayed Effects

No information on significant adverse effects.

#### Irritation/Corrosivity Data

No data available.

#### Respiratory Sensitization

No data available.

#### Dermal Sensitization

No data available.

### Component Carcinogenicity

ABS resin	9003-56-9
IARC:	Supplement 7 [1987]; Monograph 19 [1979] (Group 3 (not classifiable))
Styrene	100-42-5
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 82 [2002]; Monograph 60 [1994] (Group 2B (possibly carcinogenic to humans))
NTP:	Reasonably Anticipated To Be A Human Carcinogen
DFG:	Category 5 (low carcinogenic potency)

# Safety Data Sheet

Material Name: ABS 3D Printer Filament/ MakerBot ABS

SDS ID: MB-001\_US

OSHA:	Present
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## Germ Cell Mutagenicity

No data available.

## Tumorigenic Data

No data available

## Reproductive Toxicity

No effects are expected due to the low concentration of the component(s).

## 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.

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## Section 12 - ECOLOGICAL INFORMATION

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### Component Analysis - Aquatic Toxicity

Styrene	100-42-5
Fish:	LC50 96 h Pimephales promelas 3.24 - 4.99 mg/L [flow-through]; LC50 96 h Lepomis macrochirus 19.03 - 33.53 mg/L [static]; LC50 96 h Pimephales promelas 6.75 - 14.5 mg/L [static]; LC50 96 h Poecilia reticulata 58.75 - 95.32 mg/L [static]
Algae:	EC50 72 h Pseudokirchneriella subcapitata 1.4 mg/L IUCLID; EC50 96 h Pseudokirchneriella subcapitata 0.72 mg/L IUCLID; EC50 72 h Pseudokirchneriella subcapitata 0.46 - 4.3 mg/L [static] EPA; EC50 96 h Pseudokirchneriella subcapitata 0.15 - 3.2 mg/L [static] EPA
Invertebrate:	EC50 48 h Daphnia magna 3.3 - 7.4 mg/L EPA

### Persistence and Degradability

No information available for the product.

### Bioaccumulative Potential

No information available for the product.

### Mobility

No information available for the product.

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## Section 13 - DISPOSAL CONSIDERATIONS

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### Disposal Methods

# Safety Data Sheet

**Material Name: ABS 3D Printer Filament/ MakerBot ABS**

**SDS ID: MB-001\_US**

Dispose of contents/container in accordance with local/regional/national/international regulations. Avoid release to the environment. Incineration should be done in accordance with prevailing municipal, state, and federal laws and standards from local environmental agencies.

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## Section 14 - TRANSPORT INFORMATION

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### US DOT Information:

UN/NA #: Not regulated

### 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.

Styrene	100-42-5
IBC Code:	Category Y

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## Section 15 - REGULATORY INFORMATION

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### 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.

Styrene	100-42-5
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:** 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:

Component	CAS	CA	MA	MN	NJ	PA
Styrene	100-42-5	Yes	Yes	Yes	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

Styrene	100-42-5
	0.1 %



# Safety Data Sheet

Material Name: ABS 3D Printer Filament/ MakerBot ABS

SDS ID: MB-001\_US

## Component Analysis - Inventory

ABS resin (9003-56-9)

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

Styrene (100-42-5)

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

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## Section 16 - OTHER INFORMATION

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### 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 : 08/24/2015

### 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.

### Other Information

#### Disclaimer:

## Safety Data Sheet

**Material Name: ABS 3D Printer Filament/ MakerBot ABS**

**SDS ID: MB-001\_US**

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.

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<b>SAFETY DATA SHEET</b>		Revision Date: 05/25/2015
AMERICAN HYDROTECH, INC.		Print Date: 8/26/2015
LOW-VOC BONDING ADHESIVE		SDS Number: R0343146
		Version: 1.1

29 CFR 1910.1200 (OSHA HazCom 2012)

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

### Product identifier

Trade name

LOW-VOC BONDING ADHESIVE

### Recommended use of the chemical and restrictions on use

<b>Details of the supplier of the safety data sheet</b> American Hydrotech, Inc. 303 East Ohio Street, Suite 2700 Chicago, IL 60611 www.hydrotechusa.com	<b>Emergency telephone number</b> PERS #11540: 1-800-633-8253
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## SECTION 2. HAZARDS IDENTIFICATION

### GHS Classification

Flammable liquids	: Category 2
Eye irritation	: Category 2A
Reproductive toxicity	: Category 2
Specific target organ systemic toxicity - single exposure	: Category 3 (Respiratory system, Central nervous system)
Specific target organ systemic toxicity - repeated exposure (Inhalation)	: Category 2 (Neurologic: other (neuropsychological effects, auditory dysfunction and effects on colour vision))

### GHS Label element

Hazard pictograms



Signal Word

: Danger

Hazard Statements

: Highly flammable liquid and vapor.  
Causes serious eye irritation.

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May cause respiratory irritation.  
 May cause drowsiness or dizziness.  
 Suspected of damaging fertility or the unborn child.  
 May cause damage to organs (Neurologic: other (neuropsychological effects, auditory dysfunction and effects on colour vision)) through prolonged or repeated exposure if inhaled.

**Precautionary Statements**

**: Prevention:**

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.  
 Use only non-sparking tools.  
 Take precautionary measures against static discharge.  
 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.  
 Wash skin thoroughly after handling.  
 Use only outdoors or in a well-ventilated area.  
 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician 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 exposed or concerned: Get medical advice/ attention.  
 If eye irritation persists: Get medical advice/ attention.  
 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

**Storage:**

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

**Disposal:**

Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

Static Accumulating liquid

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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

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Chemical nature : Static Accumulator

Chemical nature : Defatter

#### Hazardous components

Chemical Name	CAS-No.	Classification	Concentration (%)
TERT-BUTYL ACETATE	540-88-5	Flam. Liq. 2; H225  Acute Tox. 4; H332  STOT SE 3; H335, H336	46.26
ACETONE	67-64-1	Flam. Liq. 2; H225  Eye Irrit. 2A; H319  STOT SE 3; H336	21.77
TOLUENE	108-88-3	Flam. Liq. 2; H225  Skin Irrit. 2; H315  Eye Irrit. 2A; H319  Repr. 2; H361  STOT SE 3; H336  STOT RE 2; H373  Asp. Tox. 1; H304	4.78
XYLENE	1330-20-7	Flam. Liq. 3; H226  Acute Tox. 4; H312  Skin Irrit. 2; H315  Eye Irrit. 2A; H319  STOT SE 3; H335, H336  Asp. Tox. 1; H304	2.16

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MAGNESIUM OXIDE	1309-48-4	Not a hazardous substance or mixture.	1.30
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#### SECTION 4. FIRST AID MEASURES

General advice	: Move out of dangerous area. Call a POISON CENTRE or doctor/physician if exposed or you feel unwell. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled	: Move to fresh air. Keep patient warm and at rest. If unconscious place in recovery position and seek medical advice. Consult a physician after significant exposure.
In case of skin contact	: Remove contaminated clothing. If irritation develops, get medical attention. If on skin, rinse well with water. Wash contaminated clothing before re-use. If on clothes, remove clothes.
In case of eye contact	: Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye.
If swallowed	: Obtain medical attention. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: This material (or a component) has produced hyperglycemia and ketosis following substantial ingestion. Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material. Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: redness of the skin stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways) temporary changes in mood and behavior effects on memory Shortness of breath

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confusion  
 irregular heartbeat  
 Causes serious eye irritation.  
 May cause respiratory irritation.  
 May cause drowsiness or dizziness.  
 Suspected of damaging fertility or the unborn child.  
 May cause damage to organs through prolonged or repeated exposure if inhaled.

Notes to physician : No hazards which require special first aid measures.

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## SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Water spray  
 Foam  
 Alcohol-resistant foam  
 Carbon dioxide (CO<sub>2</sub>)  
 Dry chemical

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.  
 Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.  
 Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : acrid smoke and fumes  
 carbon dioxide and carbon monoxide  
 hydrogen chloride  
 Carbon monoxide  
 Organic acids  
 Aldehydes  
 Alcohols  
 Hydrocarbons  
 phenols  
 magnesium oxide fumes

Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.  
 Use a water spray to cool fully closed containers.

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Special protective equipment : In the event of fire, wear self-contained breathing apparatus.  
for firefighters

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Evacuate personnel to safe areas.  
Remove all sources of ignition.  
Use personal protective equipment.  
Ensure adequate ventilation.  
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.  
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
- Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
- Other information : Comply with all applicable federal, state, and local regulations.  
Suppress (knock down) gases/vapours/mists with a water spray jet.

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## SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Open drum carefully as content may be under pressure.  
Avoid formation of aerosol.  
Provide sufficient air exchange and/or exhaust in work rooms.  
Do not breathe vapours/dust.  
Do not smoke.  
Container hazardous when empty.  
Take precautionary measures against static discharges.  
Avoid exposure - obtain special instructions before use.  
Avoid contact with skin and eyes.  
Smoking, eating and drinking should be prohibited in the application area.  
For personal protection see section 8.  
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Observe label precautions.



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No smoking.  
Electrical installations / working materials must comply with the technological safety standards.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
TERT-BUTYL ACETATE	540-88-5	TWA	200 ppm	ACGIH
		REL	200 ppm 950 mg/m3	NIOSH/GUID E
		PEL	200 ppm 950 mg/m3	OSHA_TRANS
ACETONE	67-64-1	TWA	500 ppm	ACGIH
		STEL	750 ppm	ACGIH
		REL	250 ppm 590 mg/m3	NIOSH/GUID E
		PEL	1,000 ppm 2,400 mg/m3	OSHA_TRANS
		TWA	250 ppm	ACGIHLIS_P
		STEL	500 ppm	ACGIHLIS_P
		TWA	750 ppm 1,800 mg/m3	Z1A
		STEL	1,000 ppm 2,400 mg/m3	Z1A
TOLUENE	108-88-3	TWA	20 ppm	ACGIH
		REL	100 ppm 375 mg/m3	NIOSH/GUID E
		STEL	150 ppm 560 mg/m3	NIOSH/GUID E
		TWA	200 ppm	OSHA/Z2
		Ceiling	300 ppm	OSHA/Z2
		MAX. CONC	500 ppm	OSHA/Z2
XYLENE	1330-20-7	TWA	100 ppm	ACGIH
		STEL	150 ppm	ACGIH
		PEL	100 ppm 435 mg/m3	OSHA_TRANS
		REL	100 ppm 435 mg/m3	NIOSH/GUID E
		STEL	150 ppm 655 mg/m3	NIOSH/GUID E
MAGNESIUM OXIDE	1309-48-4	TWA (Inhalable fraction.)	10 mg/m3 Inhalable fraction.	PY OEL
		TWA	10 mg/m3 Inhalable fraction.	ACGIH

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		PEL	15 mg/m3 Total particulate.	OSHA_TRANS
ETHYL BENZENE	100-41-4	TWA	20 ppm	ACGIH
		REL	100 ppm 435 mg/m3	NIOSH/GUIDE
		STEL	125 ppm 545 mg/m3	NIOSH/GUIDE
		PEL	100 ppm 435 mg/m3	OSHA_TRANS
TALC	14807-96-6	TWA	2 mg/m3 Respirable fraction.	ACGIH
		REL	2 mg/m3 Respirable.	NIOSH/GUIDE
		TWA	0.1 mg/m3 Respirable.	Z3
		TWA	0.3 mg/m3 Total dust.	Z3

#### Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
ACETONE	67-64-1	acetone	Urine	Sampling time: End of shift.	50 mg/l	
Remarks:	Nonspecific					
TOLUENE	108-88-3	o-Cresol, with hydrolysis	Creatinine in urine	Sampling time: End of shift.	0.3 mg/g	
Remarks:	Background					
		toluene	Urine	Sampling time: End of shift.	0.03 mg/l	
		toluene	Blood	Sampling time: Prior to last shift of work week.	0.02 mg/l	
XYLENE	1330-20-7	Methylhippuric acids	Creatinine in urine	Sampling time: End of shift.	1.5 g/g	

#### Engineering measures

: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

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#### Personal protective equipment

Respiratory protection	: In the case of vapour formation use a respirator with an approved filter.  A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.
Hand protection Remarks	: The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Eye protection	: Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.
Skin and body protection	: Wear as appropriate: impervious clothing Safety shoes Flame-resistant clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place. Wear resistant gloves (consult your safety equipment supplier).
Hygiene measures	: Wash hands before breaks and at the end of workday. When using do not eat or drink. When using do not smoke.

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#### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: liquid
Colour	: yellow
Odour	: No data available
Odour Threshold	: No data available
pH	: No data available
Melting point/freezing point	: No data available
Boiling point/boiling range	: 133 °F / 56 °C (1,013.232 hPa) Calculated Phase Transition Liquid/Gas

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Flash point : -4 °F / -20 °C  
Calculated Flash Point

Evaporation rate : No data available

Flammability (solid, gas) :  
No data available

Flammability (liquids) : Static Accumulating liquid

Flammability (liquids) :  
Upper explosion limit : 12.8 %(V)  
GLP: Calculated Explosive Limit

Lower explosion limit : 1 %(V)  
GLP: Calculated Explosive Limit

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : 0.906 (77.00 °F)

Density : 0.906 g/cm3 (77.00 °F)

Solubility(ies)

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Thermal decomposition : No data available

Viscosity

Viscosity, dynamic : 2,500 mPa.s

Viscosity, kinematic : No data available

Oxidizing properties : No data available

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## SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Vapours may form explosive mixture with air.

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Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Acids  
alkalis  
Amines  
Ammonia  
chlorine trifluoride  
halogens  
nitrates  
Oxidizing agents  
peroxides  
phosphorus pentachloride  
Reducing agents  
strong alkalis

Hazardous decomposition products : carbon dioxide and carbon monoxide  
Hydrocarbons

---

## SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation  
Skin contact  
Eye Contact  
Ingestion

### Acute toxicity

Not classified based on available information.

#### Components:

##### TERT-BUTYL ACETATE:

Acute oral toxicity : LD 50 (Rat, male): 4,100 mg/kg

Acute inhalation toxicity : LC 50 (Rat): 4211 ppm  
Exposure time: 6 h  
Test atmosphere: vapour  
Assessment: The component/mixture is classified as acute inhalation toxicity, category 4.

Acute dermal toxicity : LD 50 (Rabbit): > 19,800 mg/kg

##### ACETONE:

Acute oral toxicity : LD 50 (Rat, female): 5,800 mg/kg

Acute inhalation toxicity : LC 50 (Rat, female): 76 mg/l  
Exposure time: 4 h

Acute dermal toxicity : LD 50 (Rabbit): > 7,426 mg/kg

##### TOLUENE:

Acute oral toxicity : LD 50 (Rat): > 5,000 mg/kg

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Acute inhalation toxicity : LC 50 (Rat): 8000 ppm  
Exposure time: 4 h

Acute dermal toxicity : LD 50 (Rabbit): 12,124 mg/kg

**XYLENE:**

Acute oral toxicity : LD 50 (Rat): 3,523 - 8,600 mg/kg

Acute inhalation toxicity : LC 50 (Rat): 6700 ppm  
Exposure time: 4 h  
Test atmosphere: vapour

Acute dermal toxicity : LD 50 (Rabbit): 1,700 mg/kg

**MAGNESIUM OXIDE:**

Acute oral toxicity : LD 50 (Rat): > 5,000 mg/kg

**Skin corrosion/irritation**

Not classified based on available information.

**Product:**

Result: Repeated exposure may cause skin dryness or cracking.

Remarks: May cause skin irritation in susceptible persons.

**Components:**

**TERT-BUTYL ACETATE:**

Result: Mildly irritating to skin

**ACETONE:**

Result: Mildly irritating to skin

Result: Repeated exposure may cause skin dryness or cracking.

**TOLUENE:**

Result: Irritating to skin

**XYLENE:**

Result: Irritating to skin

**MAGNESIUM OXIDE:**

Result: Possibly irritating to skin

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Product:**

Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin., Causes serious eye irritation.

**Components:**

**TERT-BUTYL ACETATE:**

Result: Mildly irritating to eyes

**ACETONE:**

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Result: Irritating to eyes

TOLUENE:

Result: Irritating to eyes

XYLENE:

Result: Irritating to eyes

MAGNESIUM OXIDE:

Result: Possibly irritating to eyes

#### **Respiratory or skin sensitisation**

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

#### **Components:**

TERT-BUTYL ACETATE:

Species: Guinea pig

Assessment: Did not cause sensitisation on laboratory animals.

Method: Buehler Test

#### **Germ cell mutagenicity**

Not classified based on available information.

#### **Components:**

TERT-BUTYL ACETATE:

Genotoxicity in vitro

: Test Type: Ames test

Test species: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)

Result: negative

: Test Type: Chromosome aberration test in vitro

Test species: Human lymphocytes

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: negative

Genotoxicity in vivo

: Test Type: in vivo assay

Test species: Rat (male and female)

Cell type: Bone marrow

Application Route: Inhalation

Result: negative

#### **Carcinogenicity**

Not classified based on available information.

#### **Reproductive toxicity**

Suspected of damaging fertility or the unborn child.

#### **Components:**

TOLUENE:

Reproductive toxicity -

: Some evidence of adverse effects on sexual function and

Assessment

fertility, and/or on development, based on animal experiments.

#### **STOT - single exposure**

May cause respiratory irritation.

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May cause drowsiness or dizziness.

**Components:**

TERT-BUTYL ACETATE:

Exposure routes: Ingestion

Target Organs: Central nervous system

Assessment: May cause drowsiness or dizziness.

Exposure routes: Inhalation

Target Organs: Respiratory Tract

Assessment: May cause respiratory irritation.

ACETONE:

Exposure routes: Inhalation

Target Organs: Nervous system

Assessment: May cause drowsiness or dizziness.

TOLUENE:

Exposure routes: Inhalation

Target Organs: Central nervous system

Assessment: May cause drowsiness or dizziness.

XYLENE:

Assessment: May cause respiratory irritation., May cause drowsiness or dizziness.

**STOT - repeated exposure**

May cause damage to organs (Neurologic: other (neuropsychological effects, auditory dysfunction and effects on colour vision)) through prolonged or repeated exposure if inhaled.

**Components:**

TOLUENE:

Exposure routes: Inhalation

Target Organs: Neurologic: other (neuropsychological effects, auditory dysfunction and effects on colour vision)

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

**Aspiration toxicity**

Not classified based on available information.

**Product:**

No aspiration toxicity classification

**Components:**

ACETONE:

May be harmful if swallowed and enters airways.

TOLUENE:

May be fatal if swallowed and enters airways.

XYLENE:

May be fatal if swallowed and enters airways.

**Further information**

**Product:**

Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting., Concentrations substantially above the TLV value may cause narcotic effects., Solvents may degrease the skin.



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**Carcinogenicity:**  
**IARC**

Group 2B: Possibly carcinogenic to humans

ETHYL BENZENE 100-41-4

TALC 14807-96-6

**OSHA**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**NTP**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

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## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Components:**

**TERT-BUTYL ACETATE:**

Toxicity to fish

: LC50 (Oncorhynchus mykiss (rainbow trout)): 240 mg/l  
Exposure time: 96 h  
Test Type: semi-static test  
Method: OECD Test Guideline 203  
GLP: yes

Toxicity to daphnia and other aquatic invertebrates

: EC50 (Water flea (Daphnia magna)): 350 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202  
GLP: yes

Toxicity to algae

: ErC50 (Pseudokirchneriella subcapitata (microalgae)): 16 mg/l  
End point: Growth inhibition  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201  
GLP: yes

NOEC (Pseudokirchneriella subcapitata (microalgae)): 2.3 mg/l  
End point: Growth inhibition  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201  
GLP: yes

**ACETONE:**

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Toxicity to fish : LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss)): 4,740 - 6,330 mg/l  
 Exposure time: 96 h  
 Test Type: static test  
  
 LC 50 (Fathead minnow (Pimephales promelas)): 8,733 - 9,482 mg/l  
 Exposure time: 96 h  
 Test Type: flow-through test

Toxicity to algae : NOEC (Microcystis aeruginosa): 530 mg/l  
 Exposure time: 8 d  
 Test Type: static test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 2,112 mg/l  
 Exposure time: 28 d  
 Test Type: flow-through test

**TOLUENE:**

Toxicity to fish : LC50 (Oncorhynchus kisutch (coho salmon)): 5.5 mg/l  
 Exposure time: 96 h  
 Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (Ceriodaphnia dubia)): 3.78 mg/l  
 Exposure time: 48 h  
 Remarks: Mortality

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (microalgae)): > 433 mg/l  
 End point: Growth inhibition  
 Exposure time: 96 h  
  
 NOEC (Scenedesmus quadricauda (Green algae)): > 400 mg/l  
 End point: Growth inhibition  
 Exposure time: 7 d

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 1.39 mg/l  
 Exposure time: 40 d  
 Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Water flea (Ceriodaphnia dubia)): 0.74 mg/l  
 Exposure time: 7 d

**XYLENE:**

Toxicity to fish : LC 50 (Fathead minnow (Pimephales promelas)): 23.53 - 29.97 mg/l  
 Exposure time: 96 h  
 Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : LC 50 (Water flea (Daphnia magna)): > 100 - < 1,000 mg/l  
 Exposure time: 24 h

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Test Type: static test

#### Persistence and degradability

##### Components:

##### TERT-BUTYL ACETATE:

Biodegradability : aerobic  
 Result: Not readily biodegradable.  
 Biodegradation: 50 %  
 Exposure time: 28 d  
 Method: OECD Test Guideline 301D

##### ACETONE:

Biodegradability : Result: Readily biodegradable  
 Biodegradation: 90.9 %  
 Exposure time: 28 d  
 Method: OECD Test Guideline 301B

##### TOLUENE:

Biodegradability : Result: Readily biodegradable

##### XYLENE:

Physico-chemical : Remarks: The product evaporates readily.  
 removability

##### MAGNESIUM OXIDE:

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

#### Bioaccumulative potential

##### Components:

##### TERT-BUTYL ACETATE:

Partition coefficient: n- : log Pow: 1.76  
 octanol/water

##### ACETONE:

Partition coefficient: n- : log Pow: -0.24  
 octanol/water

##### TOLUENE:

Bioaccumulation : Species: Ide, silver or golden orfe (Leuciscus idus)  
 Bioconcentration factor (BCF): 94  
 Exposure time: 3 d  
 Concentration: 0.05 mg/l  
 Method: Not reported

Partition coefficient: n- : log Pow: 2.73  
 octanol/water

##### XYLENE:

Partition coefficient: n- : log Pow: 3.16

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octanol/water

#### Mobility in soil

##### Components:

No data available

#### Other adverse effects

No data available

##### Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful to aquatic life.

##### Components:

### SECTION 13. DISPOSAL CONSIDERATIONS

#### Disposal methods

General advice : The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.

Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.  
Do not re-use empty containers.  
Do not burn, or use a cutting torch on, the empty drum.

### SECTION 14. TRANSPORT INFORMATION

#### International transport regulations

##### REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.
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#### MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

UN	1133	Adhesives	3	II	
----	------	-----------	---	----	--

#### INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN	1133	Adhesives	3	II	
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#### INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN	1133	Adhesives	3	II

#### INTERNATIONAL MARITIME DANGEROUS GOODS

UN	1133	ADHESIVES	3	II

#### TRANSPORT CANADA - INLAND WATERWAYS

UN	1133	ADHESIVES	3	II

#### TRANSPORT CANADA - RAIL

UN	1133	ADHESIVES	3	II

#### TRANSPORT CANADA - ROAD

UN	1133	ADHESIVES	3	II

#### U.S. DOT - INLAND WATERWAYS

UN	1133	Adhesives	3	II

#### U.S. DOT - RAIL

UN	1133	Adhesives	3	II

#### U.S. DOT - ROAD

UN	1133	ADHESIVOS	3	II

\*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Marine pollutant	no
------------------	----

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

## SECTION 15. REGULATORY INFORMATION

### EPCRA - Emergency Planning and Community Right-to-Know Act

#### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
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XYLENE	1330-20-7	100	4608.719698
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**SARA 311/312 Hazards** : Fire Hazard  
Acute Health Hazard  
Chronic Health Hazard

**SARA 313 Component(s)**

TOLUENE	108-88-3	4.78 %
XYLENE	1330-20-7	2.16 %
ETHYL BENZENE	100-41-4	0.63 %

**California Prop 65**

WARNING! This product contains a chemical known to the State of California to cause cancer.

ETHYL BENZENE	100-41-4
FORMALDEHYDE	50-00-0
2-CHLORO-1,3-BUTADIENE	126-99-8
BENZENE	71-43-2
TRANS-1,4-DICHLOROBUT-2-ENE	110-57-6
LEAD OXIDE	1317-36-8
CADMIUM OXIDE	1306-19-0

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

TOLUENE	108-88-3
BENZENE	71-43-2
LEAD OXIDE	1317-36-8
CADMIUM OXIDE	1306-19-0

**The components of this product are reported in the following inventories:**

TSCA : On TSCA Inventory

DSL : All components of this product are on the Canadian DSL.

AUSTR : Not in compliance with the inventory

ENCS : Not in compliance with the inventory

KECL : On the inventory, or in compliance with the inventory

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PICCS : Not in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

#### Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

## SECTION 16. OTHER INFORMATION

#### Further information

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NFPA:	HMIS III:						
<p>Flammability</p> <p>Health</p> <p>Instability</p> <p>Special hazard.</p>	<table> <tr> <td><b>HEALTH</b></td><td><b>2*</b></td></tr> <tr> <td><b>FLAMMABILITY</b></td><td><b>3</b></td></tr> <tr> <td><b>PHYSICAL HAZARD</b></td><td><b>0</b></td></tr> </table> <p>0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p>	<b>HEALTH</b>	<b>2*</b>	<b>FLAMMABILITY</b>	<b>3</b>	<b>PHYSICAL HAZARD</b>	<b>0</b>
<b>HEALTH</b>	<b>2*</b>						
<b>FLAMMABILITY</b>	<b>3</b>						
<b>PHYSICAL HAZARD</b>	<b>0</b>						

#### NFPA Flammable and Combustible Liquids Classification

Flammable Liquid Class IB

#### Full text of H-Statements referred to under sections 2 and 3.

H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory 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 if inhaled.

Sources of key data used to compile the Safety Data Sheet

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Ashland internal data including own and sponsored test reports  
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists  
BEI : Biological Exposure Index  
CAS : Chemical Abstracts Service (Division of the American Chemical Society).  
CMR : Carcinogenic, Mutagenic or Toxic for Reproduction  
FG : Food grade  
GHS : Globally Harmonized System of Classification and Labeling of Chemicals.  
H-statement : Hazard Statement  
IATA : International Air Transport Association.  
IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization  
ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"  
IMDG : International Maritime Code for Dangerous Goods  
ISO : International Organization for Standardization  
logPow : octanol-water partition coefficient  
LCxx : Lethal Concentration, for xx percent of test population  
LDxx : Lethal Dose, for xx percent of test population.  
ICxx : Inhibitory Concentration for xx of a substance  
Ecxx : Effective Concentration of xx  
N.O.S.: Not Otherwise Specified  
OECD : Organization for Economic Co-operation and Development  
OEL : Occupational Exposure Limit  
P-Statement : Precautionary Statement  
PBT : Persistent , Bioaccumulative and Toxic  
PPE : Personal Protective Equipment  
STEL : Short-term exposure limit  
STOT : Specific Target Organ Toxicity  
TLV : Threshold Limit Value  
TWA : Time-weighted average  
vPvB : Very Persistent and Very Bioaccumulative  
WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act  
DOT : Department of Transportation  
FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act  
HMIRC : Hazardous Materials Information Review Commission  
HMIS : Hazardous Materials Identification System  
NFPA : National Fire Protection Association  
NIOSH : National Institute for Occupational Safety and Health  
OSHA : Occupational Safety and Health Administration  
PMRA : Health Canada Pest Management Regulatory Agency



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RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System

# MATERIAL SAFETY DATA SHEET

American Hydrotech, Inc.  
303 East Ohio Street, 2700  
Chicago, IL 60611

INFORMATION TELEPHONE: (312) 337-4998  
EMERGENCY TELEPHONE:  
DATE OF PREPARATION: September 25, 2000

## SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME(S): COOL-CAP M-100 WHITE COAT AND M-700 BASE COAT  
PRODUCT NUMBER(S):  
PRODUCT CLASS: ACRYLIC LATEX ROOF COATING

## SECTION II - HAZARDOUS INGREDIENTS

COMPONENTS	WT. %	CAS NO.	TLV	PEL
Titanium Dioxide	< 10.0 %	13463-67-7	10mg/m3	10mg/m3
Zinc Oxide	< 5.0 %	1314-13-2	10mg/m3	10mg/m3

## SECTION III - PHYSICAL DATA

BOILING RANGE: 212°F/100°C VAPOR DENSITY: HEAVIER THAN AIR.  
EVAPORATION RATE: SLOWER THAN ETHER VOLATILE VOLUME: 55%  
WEIGHT PER GALLON: APPROX. 11 Lb.

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: OSHA. None. EXTINGUISHING MEDIA: CO<sub>2</sub> DRY CHEMICAL,  
WATER MIST OR WATER FOG.  
DOT: NOT REGULATED. UNUSUAL FIRE AND EXPLOSION HAZARDS:  
CLOSED CONTAINER MAY EXPLODE IN  
EXTREME HEAT.  
FLASH POINT: NON-COMBUSTIBLE. (PMCC)  
LEL: NONE. SPECIAL FIRE FIGHTING PROCEDURES: NONE.

## SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: BREATHING OF HIGH VAPOR CONCENTRATIONS MAY CAUSE NAUSEA,  
DIZZINESS, IRRITATION TO NASAL AND RESPIRATORY PASSAGES.  
MEDICAL CONDITIONS PRONE TO AGGRAVATION BY OVEREXPOSURE: UNKNOWN.  
PRIMARY ROUTE(S) OF ENTRY: INHALATION, INGESTION, SKIN OR EYE CONTACT.  
EMERGENCY FIRST AID PROCEDURES:  
INHALATION: MOVE SUBJECT TO FRESH AIR.  
INGESTION: DRINK 2 GLASSES OF WATER. DO NOT INDUCE VOMITING. CONSULT A PHYSICIAN.  
SKIN: WASH THOROUGHLY WITH SOAP AND WATER.  
EYES: FLUSH WITH WATER FOR 15 MINUTES. IF IRRITATION PERSISTS CONSULT A PHYSICIAN.

## **SECTION VI - REACTIVITY DATA**

**STABILITY:** STABLE.

**HAZARDOUS POLYMERIZATION:** WILL NOT OCCUR.

**HAZARDOUS DECOMPOSITION PRODUCTS:** NONE KNOWN.

**CONDITIONS TO AVOID:** EXTREME HEAT.

**INCOMPATIBILITY (Materials to Avoid):** MATERIALS WHICH REACT WITH WATER.

## **SECTION VII - SPILL OR LEAK PROCEDURES**

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** SOAK UP WITH ABSORBENT MATERIAL. LET DRY. DISCARD IN DISPOSABLE CONTAINERS.

**WASTE DISPOSAL METHOD:** AS SOLID WASTE PER LOCAL, STATE AND FEDERAL REGULATIONS.

## **SECTION VIII - SAFE HANDLING AND USE INFORMATION**

**RESPIRATORY PROTECTION:** USE NIOSH APPROVED AIR RESPIRATOR WHEN SPRAYING MATERIAL.

**VENTILATION:** PROVIDE SUFFICIENT NATURAL OR ARTIFICIAL VENTILATION.

**PROTECTIVE GLOVES:** OPTIONAL.

**EYE PROTECTION:** SAFETY GLASSES OR EYE SHIELD.

**OTHER PROTECTIVE EQUIPMENT:** NONE.

## **SECTION IX - SPECIAL PRECAUTIONS**

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:** USE AND STORE THIS PRODUCT BETWEEN 40°F AND 100°F WITH ADEQUATE VENTILATION.

**OTHER PRECAUTIONS:** KEEP AWAY FROM CHILDREN. DO NOT TAKE INTERNALLY.

# MATERIAL SAFETY DATA SHEET

American Hydrotech, Inc.  
303 East Ohio Street, 2700  
Chicago, IL 60611

INFORMATION TELEPHONE: (312) 337-4998  
EMERGENCY TELEPHONE:  
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WATER MIST OR WATER FOG.  
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CLOSED CONTAINER MAY EXPLODE IN  
EXTREME HEAT.  
FLASH POINT: NON-COMBUSTIBLE. (PMCC)  
LEL: NONE. SPECIAL FIRE FIGHTING PROCEDURES: NONE.

## SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: BREATHING OF HIGH VAPOR CONCENTRATIONS MAY CAUSE NAUSEA,  
DIZZINESS, IRRITATION TO NASAL AND RESPIRATORY PASSAGES.  
MEDICAL CONDITIONS PRONE TO AGGRAVATION BY OVEREXPOSURE: UNKNOWN.  
PRIMARY ROUTE(S) OF ENTRY: INHALATION, INGESTION, SKIN OR EYE CONTACT.  
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INHALATION: MOVE SUBJECT TO FRESH AIR.  
INGESTION: DRINK 2 GLASSES OF WATER. DO NOT INDUCE VOMITING. CONSULT A PHYSICIAN.  
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**CONDITIONS TO AVOID:** EXTREME HEAT.

**INCOMPATIBILITY (Materials to Avoid):** MATERIALS WHICH REACT WITH WATER.

## **SECTION VII - SPILL OR LEAK PROCEDURES**

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** SOAK UP WITH ABSORBENT MATERIAL. LET DRY. DISCARD IN DISPOSABLE CONTAINERS.

**WASTE DISPOSAL METHOD:** AS SOLID WASTE PER LOCAL, STATE AND FEDERAL REGULATIONS.

## **SECTION VIII - SAFE HANDLING AND USE INFORMATION**

**RESPIRATORY PROTECTION:** USE NIOSH APPROVED AIR RESPIRATOR WHEN SPRAYING MATERIAL.

**VENTILATION:** PROVIDE SUFFICIENT NATURAL OR ARTIFICIAL VENTILATION.

**PROTECTIVE GLOVES:** OPTIONAL.

**EYE PROTECTION:** SAFETY GLASSES OR EYE SHIELD.

**OTHER PROTECTIVE EQUIPMENT:** NONE.

## **SECTION IX - SPECIAL PRECAUTIONS**

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:** USE AND STORE THIS PRODUCT BETWEEN 40°F AND 100°F WITH ADEQUATE VENTILATION.

**OTHER PRECAUTIONS:** KEEP AWAY FROM CHILDREN. DO NOT TAKE INTERNALLY.



# SAFETY DATA SHEET

## THE DOW CHEMICAL COMPANY

**Product name:** STYROFOAM™  
Extruded Foam Roof Insulation

**Issue Date:** 09/04/2015

**Print Date:** 06/16/2016

THE DOW CHEMICAL COMPANY encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

### 1. IDENTIFICATION

**Product name:** STYROFOAM™ Extruded Foam Roof Insulation

**Recommended use of the chemical and restrictions on use**

**Identified uses:** Thermal insulation.

#### COMPANY IDENTIFICATION

THE DOW CHEMICAL COMPANY  
2030 WILLARD H DOW CENTER  
MIDLAND MI 48674-0000  
UNITED STATES

**Customer Information Number:**

800-258-2436  
SDSQuestion@dow.com

#### EMERGENCY TELEPHONE NUMBER

**24-Hour Emergency Contact:** CHEMTREC +1 800-424-9300

**Local Emergency Contact:** 800-424-9300

### 2. HAZARDS IDENTIFICATION

#### Hazard classification

This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

#### Other hazards

No data available

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical nature:** Construction and composite applications

This product is an article.

**Component**

**CASRN**

**Concentration**

2-Propenenitrile, polymer with ethenylbenzene	9003-54-7	> 60.0 - < 100.0 %
Styrene, polymers	9003-53-6	<= 10.0 %
1,1,1,2-Tetrafluoroethane	811-97-2	>= 5.0 - <= 10.0 %

*Note*

Extruded polystyrene foam containing a halogenated flame retardant system.

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## 4. FIRST AID MEASURES

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### Description of first aid measures

**General advice:** If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air; if effects occur, consult a physician.

**Skin contact:** Wash off with plenty of water.

**Eye contact:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

**Ingestion:** No emergency medical treatment necessary.

**Most important symptoms and effects, both acute and delayed:** Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

### Indication of any immediate medical attention and special treatment needed

**Notes to physician:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

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## 5. FIREFIGHTING MEASURES

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**Suitable extinguishing media:** Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam.

**Unsuitable extinguishing media:** No data available

### Special hazards arising from the substance or mixture

**Hazardous combustion products:** During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. In smoldering or flaming conditions, carbon monoxide, carbon dioxide and carbon are generated. Combustion products may include and are not limited to: Hydrogen halides. Based on combustion toxicity testing, the effects of combustion from this foam are not more acutely toxic than the effects of combustion from common building materials such as wood.

**Unusual Fire and Explosion Hazards:** Mechanical cutting, grinding or sawing can cause formation of dusts. To reduce the potential for dust explosion, do not permit dust to accumulate. This product contains a flame retardant to inhibit accidental ignition from small fire sources. This plastic foam product is combustible and should be protected from flames and other high heat sources. For more information, contact Dow. Dense smoke is produced when product burns.

**Advice for firefighters**

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. Soak thoroughly with water to cool and prevent re-ignition. If material is molten, do not apply direct waterstream. Use fine water spray or foam. Cool surroundings with water to localize fire zone.

**Special protective equipment for firefighters:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

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## **6. ACCIDENTAL RELEASE MEASURES**

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**Personal precautions, protective equipment and emergency procedures:** Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**Environmental precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

**Methods and materials for containment and cleaning up:** Contain spilled material if possible. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

---

## **7. HANDLING AND STORAGE**

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**Precautions for safe handling:** Fabrication methods which involve cutting into this product may release the blowing agent(s) remaining in the cells. Use ventilation adequate to keep exposures below recommended exposure limits. See the safety datasheet. Do not enter confined spaces unless adequately ventilated. Mechanical cutting, grinding or sawing can cause formation of dusts. To reduce the potential for dust explosion, do not permit dust to accumulate. This product is combustible and may constitute a fire hazard if improperly used or installed. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

**Conditions for safe storage:** When large quantities of this product are stored or fabricated, blowing agents may be released. Released blowing agents may thermally decompose to form gases which may accelerate corrosion or rust formation of heaters, boilers, gas fired recirculating air furnaces or heaters, or gas water heaters.

**Storage stability**

**Shelf life:** Use within 360 Month



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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
1,1,1,2-Tetrafluoroethane	US WEEL	TWA	1,000 ppm

Concentrations of the blowing agents anticipated incidental to proper handling are expected to be well below those which cause acute inhalation effects and below exposure guidelines.

### Exposure controls

**Engineering controls:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

### Individual protection measures

**Eye/face protection:** Eye protection should not be necessary. For fabrication operations safety glasses (with side shields) are recommended. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.

#### Skin protection

**Hand protection:** Use gloves to protect from mechanical injury. Selection of gloves will depend on the task.

**Other protection:** No precautions other than clean body-covering clothing should be needed.

**Respiratory protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In dusty or misty atmospheres, use an approved particulate respirator. When respiratory protection is required for certain operations, including but not limited to saw, router or hot-wire cutting, use an approved air-purifying respirator.

The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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### Appearance

Physical state	Board
Color	Blue
Odor	None
Odor Threshold	Odorless
pH	Not applicable
Melting point/range	90 - 130 °C ( 194 - 266 °F) <i>Estimated.</i>
Freezing point	Not applicable
Boiling point (760 mmHg)	Not applicable
Flash point	<b>closed cup</b> Not applicable

Evaporation Rate (Butyl Acetate = 1)	Not applicable
Flammability (solid, gas)	Not expected to form explosive dust-air mixtures.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor Pressure	Not applicable
Relative Vapor Density (air = 1)	Not applicable
Relative Density (water = 1)	0.027 - 0.064 <i>Estimated.</i>
Water solubility	Insoluble in water
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	354 °C (669 °F) <i>ASTM D1929</i>
Decomposition temperature	No test data available
Kinematic Viscosity	Not applicable
Explosive properties	No
Oxidizing properties	No
Molecular weight	No test data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

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## 10. STABILITY AND REACTIVITY

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**Reactivity:** No dangerous reaction known under conditions of normal use.

**Chemical stability:** Thermally stable at typical use temperatures.

**Possibility of hazardous reactions:** Polymerization will not occur.

**Conditions to avoid:** Avoid temperatures above 300°C (572°F) Exposure to elevated temperatures can cause product to decompose. Avoid direct sunlight.

**Incompatible materials:** Avoid contact with oxidizing materials. Avoid contact with: Aldehydes. Amines. Esters. Liquid fuels. Organic solvents.

**Hazardous decomposition products:** Does not normally decompose. Evolution of small amounts of hydrogen halides occur when heated over 250°C (482°F). Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Aromatic compounds. Aldehydes. Ethylbenzene. Hydrogen halides. Polymer fragments. Styrene. Under high heat, non-flaming conditions, small amounts of aromatic hydrocarbons such as styrene and ethylbenzene are generated.

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## 11. TOXICOLOGICAL INFORMATION

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*Toxicological information appears in this section when such data is available.*

**Acute toxicity**

**Acute oral toxicity**

Swallowing is unlikely because of the physical state. Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product: Single dose oral LD50 has not been determined.

**Acute dermal toxicity**

Skin absorption is unlikely due to physical properties.

As product: The dermal LD50 has not been determined.

**Acute inhalation toxicity**

Dust may cause irritation to upper respiratory tract (nose and throat). Fumes/vapors released during thermal operations such as hot wire cutting may cause respiratory irritation.

Concentrations of the blowing agents anticipated incidental to proper handling are expected to be well below those which cause acute inhalation effects and below exposure guidelines.

The LC50 has not been determined.,

**Skin corrosion/irritation**

Essentially nonirritating to skin.

Mechanical injury only.

**Serious eye damage/eye irritation**

Solid or dust may cause irritation or corneal injury due to mechanical action.

Fumes/vapor released during thermal operations such as hot-wire cutting may cause eye irritation.

**Sensitization**

Relevant data not available.

For respiratory sensitization:

Relevant data not available.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

Available data are inadequate to determine single exposure specific target organ toxicity.

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Additives are encapsulated in the product and are not expected to be released under normal processing conditions or foreseeable emergency.

**Carcinogenicity**

Relevant data not available.

**Teratogenicity**

Contains a component(s) that is/are encapsulated in the product and are not expected to be released under normal processing conditions or foreseeable emergency

**Reproductive toxicity**

Contains a component(s) that is/are encapsulated in the product and are not expected to be released under normal processing conditions or foreseeable emergency

**Mutagenicity**

Relevant data not available.

#### Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

#### COMPONENTS INFLUENCING TOXICOLOGY:

##### 2-Propenenitrile, polymer with ethenylbenzene

###### Acute oral toxicity

LD50, Rat, > 5,000 mg/kg Estimated.

###### Acute dermal toxicity

The dermal LD50 has not been determined.

For similar material(s): LD50, Rabbit, > 2,000 mg/kg Estimated.

##### Styrene, polymers

###### Acute oral toxicity

Single dose oral LD50 has not been determined.

###### Acute dermal toxicity

The dermal LD50 has not been determined.

##### 1,1,1,2-Tetrafluoroethane

###### Acute oral toxicity

Single dose oral LD50 has not been determined.

###### Acute dermal toxicity

The dermal LD50 has not been determined.

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## 12. ECOLOGICAL INFORMATION

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*Ecotoxicological information appears in this section when such data is available.*

#### Toxicity

##### Acute toxicity to fish

Not expected to be acutely toxic to aquatic organisms.

#### Persistence and degradability

**Biodegradability:** Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected. 1,1,1,2-tetrafluoroethane (HFC-134a) remains in the foam and diffuses out slowly, most of it degrading in the troposphere to CO<sub>2</sub> and HF. 1,1,1,2-Tetrafluoroethane (HFC-134a) has a stratospheric ozone depletion potential (ODP) of zero, relative to CFC 12 (ODP=1).

#### Bioaccumulative potential

**Bioaccumulation:** No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000).

#### Mobility in soil

In the terrestrial environment, material is expected to remain in the soil.

In the aquatic environment, material is expected to float.

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### **13. DISPOSAL CONSIDERATIONS**

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**Disposal methods:** DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Landfill. Incinerator or other thermal destruction device.

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### **14. TRANSPORT INFORMATION**

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**DOT**

Not regulated for transport

**Classification for SEA transport (IMO-IMDG):**

Not regulated for transport

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

Consult IMO regulations before transporting ocean bulk

**Classification for AIR transport (IATA/ICAO):**

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

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### **15. REGULATORY INFORMATION**

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**OSHA Hazard Communication Standard**

This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312**

This product is not a hazardous chemical under 29CFR 1910.1200, and therefore is not covered by Title III of SARA.

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**Pennsylvania Worker and Community Right-To-Know Act:**

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

**California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)**

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

**United States TSCA Inventory (TSCA)**

The product meets the definition of an article and is exempt from inventory requirements.

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## 16. OTHER INFORMATION

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**Revision**

Identification Number: 101195574 / A001 / Issue Date: 09/04/2015 / Version: 11.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

**Legend**

TWA	8-hr TWA
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

**Information Source and References**

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

THE DOW CHEMICAL COMPANY urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other

than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.



AMERICAN HYDROTECH, INC.

## SAFETY DATA SHEET

### Flex Flash FV

Notice: New GHS Standard Requirements  
Material Safety Data Sheets (MSDS) / Safety Data Sheets (SDS)

The OSHA Hazard Communication Standard (29 CFR 1910.1200) was recently updated to require that Material Safety Data Sheets (MSDS) for hazardous chemical products be updated by June 1, 2015 to meet the updated Globally Harmonized System of Classification and Labeling of Chemicals (GHS) format and content requirements for Safety Data Sheets (SDS).

**Flex Flash FV** supplied by American Hydrotech are not classified as a hazardous chemical under the 1910.1200 rule. **Flex Flash FV** meet the OSHA definition of manufactured “articles” (1910.1200(c)) that will not expose users to hazardous chemicals under normal and expected conditions of use, and are therefore exempt from all requirements of the rule, including the requirement to produce an SDS (1910.1200(b)(6)(v)).

American Hydrotech will continue to provide product data sheets for each of our products. However, effective immediately we will no longer provide SDS for those products that are not classified as hazardous chemicals as outlined in the new GHS standard.

For more information on OSHA Hazard Communication Standard (29 CFR 1910.1200), please visit [www.osha.gov](http://www.osha.gov).



# SAFETY DATA SHEET

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Chicago, IL 60611  
(312) 337-4998  
www.hydrotechusa.com

2016  
Issue Date: 11-7-12

## Safety Data Sheet

### Section 1 - Chemical Product and Company Identification

Product: FLEX-FLASH F  
Chemical Family: Polyester Fabric

### Section 2 – Hazards Identification

#### **Emergency Overview**

None of the components in this material are considered hazardous.

#### **Route of Exposure-Skin**

Possible mechanical irritation.

#### **Route of Exposure-Eye**

Not expected to be a concern, given that this product is an inert solid.

#### **Route of Exposure-Ingestion**

Not Applicable

#### **Route of Exposure-Inhalation**

Not expected to be a concern, given that this product is an inert solid.

#### **HMIS Ratings**

Health: 0 Fire: 1 Reactivity: 0 Personal Protection: A

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

### Section 3 - Composition

<b>CAS #</b>	<b>Component</b>	<b>Percent</b>
25038-59-9	Polyester	>85%
Mixture	Binder Resin	<15%
Mixture	Optical Brightener	<0.2%
63148-62-9	Polydimethylsiloxane	trace

**Component Information:** This product is not hazardous according to the criteria specified in 29CFR 1910.1200 (Hazard Communication Standard). This product is considered an article and does not require an SDS.

## **Section 4 - First Aid Measures**

### **First Aid-Skin**

Wash affected area with soap and water.

### **First Aid-Eye**

Rinse eyes with water for at least 15 minutes. If irritation persists, contact a physician.

### **First Aid-Ingestion**

Not Applicable

### **First Aid-Inhalation**

Not Applicable

### **First Aid-Notes to Physician**

No health conditions aggravated by exposure are identified. Contact the poison control center if any problem occurs.

## **Section 5 - Fire Fighting Measures**

**Flash Point:** Not Applicable

**Method Used:** Not Applicable

**Auto Ignition:** Not Applicable

**Flammability Classification:** Not Applicable

**Lower Explosive Limit (%):** Not Applicable

**Upper Explosive Limit (%):** Not Applicable

### **General Fire Hazards**

Solid material may burn upon extended exposure to open flames.

### **Hazardous Combustion Products**

Upon decomposition this product may emit carbon dioxide, carbon monoxide and/or low molecular weight hydrocarbons.

### **Extinguishing Media**

Water spray, foam, carbon dioxide, or dry chemical

### **Fire Fighting Equipment/Instructions**

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

### **NFPA Ratings**

Health: 0 Fire: 1 Reactivity: 0

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

## **Section 6 - Accidental Release Measures**

### **Containment Procedures**

Sweep waste fabric into a pile.

### **Clean -Up Procedures**

Sweep waste fabric into a waste container and recycle, incinerate or landfill in conformity with local disposal regulations.

### **Evacuation Procedures**

Not Applicable

### **Special Procedures**

None

## **Section 7 - Handling and Storage**

### **Handling Procedures**

Avoid exposure to heat, sparks or open flames.

Use care in stacking and storing to avoid damage to product.

**Storage Procedures**

Store material in clean, cool and dry warehouse that is equipped with a sprinkler system.

Ensure product is not stacked too high.

Store product off the floor to prevent water damage.

Avoid direct exposure to UV light.

Avoid exposure to corrosive substances.

Limit exposure to petroleum powered engine exhaust.

**Section 8 - Exposure Controls/Personal Protection**

**Component Exposure Limits**

Product is not considered to present an inhalation health hazard under reasonably anticipated conditions of use.

**Engineering Controls**

Normal room ventilation is usually adequate.

**Personal Protective Equipment**

**Personal Protective Equipment-Eyes/Face**

None usually required

**Personal Protective Equipment-Skin**

None usually required

**Personal Protective Equipment-Respiratory**

None usually required

**Personal Protective Equipment-General**

Follow individual plant safety rules.

**Section 9 - Physical & Chemical Properties**

<b>Appearance:</b>	White Fabric	<b>Odor:</b>	Not Applicable
<b>Physical State:</b>	Solid	<b>pH:</b>	Not Applicable
<b>Vapor Pressure:</b>	Not Applicable	<b>Vapor Density:</b>	Not Applicable
<b>Boiling Point:</b>	Not Applicable	<b>Melting Point:</b>	>165°C
<b>Solubility (H<sub>2</sub>O):</b>	Negligible	<b>Specific Gravity:</b>	Not Applicable
<b>Evaporation Rate:</b>	Not Applicable	<b>Percent Volatiles:</b>	NIL
<b>Packing Density:</b>	Not Applicable		

**Section 10 - Chemical Stability & Reactivity Information**

**Chemical Stability**

Stable under ordinary conditions of use and storage.

**Conditions to Avoid**

Combustible when exposed to open flames.

**Incompatibility**

None Known

**Hazardous Decomposition**

Carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbon may be emitted upon decomposition.



**Hazardous Polymerization**  
Will not occur.

## **Section 11 - Toxicological Information**

### **Acute and Chronic Toxicity**

#### **General Product Information**

No components of this product are known to be hazardous according to the criteria specified in 29CFR1910.1200 (Hazard Communication Standard).

#### **Component Analysis**

Component	CAS	LD50/LC50
Polyester	25038-59-9	None Available
Binder Resin	Mixture	None Available
Optical Brightener	Mixture	None Available
Polydimethylsiloxane	25038-59-9	Acute Oral LD50: Rat; >5,000mg/kg /Acute Dermal: Rabbit; >10,000 mg/kg (very low acute toxicity) / Acute Inhalation LC50: Rat; >535 mg/l (very low acute toxicity)

### **Carcinogenicity**

#### **General Product Information**

Product is considered non-hazardous.

#### **Epidemiology**

No information available.

#### **Neurotoxicity**

No information available.

#### **Mutagenicity**

No information available.

#### **Teratogenicity**

No information available.

#### **Other Toxicological Information**

Specific toxicity testing has not been performed on this product. Hazard evaluation is based on information from similar products, raw material data, and technical literature.

## **Section 12 - Ecological Information**

### **Ecotoxicity**

#### **General product Information**

No available information.

#### **Environmental Fate**

No available information.

## **Section 13 - Disposal Considerations**

### **US EPA Waste Number & Descriptions**

#### **General Product Information**

None identified.

### Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components

### Disposal Instructions

Dispose of container and unused contents in accordance with federal, state and local requirements. Processing, use or contamination of this product may change the waste management options.

## Section 14 - Transportation Information

### Transportation Regulations

Product is not regulated for transportation.

## Section 15 - Regulatory Information

### US Federal Regulations

#### General Product Information

The composition of this material as supplied from Fiberweb meet the FDA requirements contained in 21CFR177.1630 for one or all of the listed subsections.

#### Component Analysis

Component	CAS #	SARA 302 (40CFR355 Appx A)	SARA 313 (40CFR372.65)	CERCLA (40CFR302.4)
Polyester	25038-59-9	No	No	No
Binder Resin	Mixture	No	No	No
Optical Brightener	Mixture	No	No	No
Polydimethylsiloxane	63148-62-9	No	No	No

### State Regulations

#### General Product Information

Other state regulations may apply. Check individual state requirements.

#### Component Analysis-State

The following components appear on one or more of the following state hazardous substances list:

Component	CAS	CA	FL	MA	MN	NJ	PA
Polyester	25038-59-9	No	No	No	No	No	No
Binder Resin	Mixture	No	No	NK	No	No	No
Optical Brightener	Mixture	No	NK	NK	NK	NK	NK
Polydimethylsiloxane	63148-62-9	No	No	No	No	No	No

NK = Not Known

### Component Analysis-WHMIS IDL

No components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List.

### Additional Regulatory Information

#### Component Analysis-Inventory

Component	CAS	TSCA	DSL/NDL	EINECS
Polyester	25038-59-9	Yes	Yes	Yes
Binder Resin	Mixture	Yes	Yes	Yes
Optical Brightener	Mixture	Yes	NK	NK
Polydimethylsiloxane	63148-62-9	Yes	Yes	NK

NK = Not Known



## **Section 16 - Other Information**

### **Other Information**

Material for this SDS was taken from SDS's for raw materials

### **SDS History**

Format revised 10/03; Typographical errors corrected 10/27/04; Corrections made to Section 9 2/23/05; Updated contact information 8/25/05; Updated information and changed name 12/12/06; Updated formatting 06/20/07; Change contact name 8/10/07; Updated wording 3/24/08; Updated information 6/9/09. Information updated 9/8/10, Updated logo 9-11-12. Updated formatting 11-7-12.

### **DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES**

The information in this document is believed to be correct as of the date issued.

HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY USE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THIS INFORMATION, THE RESULTS TO BE OBTAINED FROM USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE.

This information and the product are furnished on the condition that the person receiving them shall make his or her own determination as to the suitability of the product for his particular purpose and on the condition that they assume the risk of his use thereof.

THIS PRODUCT IS CONSIDERED AN ARTICLE AND DOES NOT REQUIRE A SAFETY DATA SHEET (SDS).



AMERICAN HYDROTECH, INC.

## SAFETY DATA SHEET

### FLEX-FLASH MB (smooth and granule)

Notice: New GHS Standard Requirements  
Material Safety Data Sheets (MSDS) / Safety Data Sheets (SDS)

The OSHA Hazard Communication Standard (29 CFR 1910.1200) was recently updated to require that Material Safety Data Sheets (MSDS) for hazardous chemical products be updated by June 1, 2015 to meet the updated Globally Harmonized System of Classification and Labelling of Chemicals (GHS) format and content requirements for Safety Data Sheets (SDS).

**Flex-Flash MB** supplied by American Hydrotech is not classified as a hazardous chemical under the 1910.1200 rule. **Flex-Flash MB** meets the OSHA definition of manufactured “articles” (1910.1200(c)) that will not expose users to hazardous chemicals under normal and expected conditions of use, and are therefore exempt from all requirements of the rule, including the requirement to produce an SDS (1910.1200(b)(6)(v)).

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AMERICAN HYDROTECH, INC.

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Gardendrain® GR30 / GR50

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The information contained herein is believed by American Hydrotech, Inc. to be accurate and is offered solely for the customer’s consideration, investigation and verification. Determination of suitability for use is the responsibility of the user. Hydrotech’s Limitations, Limited Warranty, & Disclaimer along with Standard Terms & Conditions apply. See [www.hydrotechusa.com](http://www.hydrotechusa.com) for more info. **Limitations:** Hydrodrain is resistant to chemicals in normal soil environments. However, some reagents may affect the performance of Hydrodrain. A Hydrotech representative should be contacted for further information to determine the suitability of use of Hydrodrain in unusual soil environments. Hydrodrain should be limited to its exposure to ultra-violet sunlight. Hydrodrain should be backfilled or covered within 7 days of installation. **Disclaimer:** All information, drawings and specifications are based on the latest published information at the time of printing. Hydrotech reserves the right to make changes due to manufacturing improvements and engineering at any time. All physical properties are minimum average roll values (MARV). Standard variations of 10% in mechanical properties and 15% in hydraulic properties are normal.

American Hydrotech, Inc.

541 N. Fairbanks Ct, Suite 2700, Chicago, IL 60611  
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[www.hydrotechusa.com](http://www.hydrotechusa.com)

# SAFETY DATA SHEET

SDS DATE: 07/30/2015

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: FLEX-FLASH UN  
SYNONYMS: UNCURED NEOPRENE SHEET RUBBER  
PRODUCT CODES:

MANUFACTURER: AMERICAN HYDROTECH, INC.  
ADDRESS: 303 EAST OHIO STREET, SUITE 2700  
CHICAGO, IL 60611

EMERGENCY #: PERS #11540: 800-633-8253 (24 hours)

OTHER CALLS: AMERICAN HYDROTECH, INC.  
(312) 337-4998

CHEMICAL NAME: Rubber Compound  
CHEMICAL FAMILY: Rubber Compound  
CHEMICAL FORMULA: Proprietary

PRODUCT USE:

PREPARED BY: American Analytical Laboratories, Inc.  
840 S. Main St.  
Akron, Ohio 44311

**PASSAIC RUBBER COMPANY**  
45 Demarest Drive  
Wayne, NJ 07470

SECTION 1 NOTES:

## SECTION 2: HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

HAZARDOUS CLASSIFICATION: Possible Carcinogenicity Category 3

SIGNAL WORD: Warning



ROUTES OF ENTRY: Inhalation, Ingestion, and skin/eye contact

### POTENTIAL HEALTH EFFECTS

**EYES:** Mildly irritating. Excessive contact can cause drying of mucous membranes of eyes due to absorption of moisture and oils.

**SKIN:** Mildly irritating

**INGESTION:** Temporary discomfort to upper respiratory tract may occur due to mechanical irritation when exposures are above the occupational exposure limit. May result in cramps and diarrhea.

**INHALATION:** Nuisance dusts. Excessive contact can cause drying of mucous membranes of nose and throat due to absorption of moisture and oils. This material can also cause nasal irritation and nosebleeds.

**ACUTE HEALTH HAZARDS:** This product can cause irritation to the eyes, respiratory tract and skin. May cause redness of the affected area.

**CHRONIC HEALTH HAZARDS:** Carbon Black - IARC listed: Group 2B (possibly carcinogenic to humans)

**REPRODUCTIVE EFFECTS:** N/A



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**MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:** Persons with breathing problems or lung disease should not work in dusty areas unless a physician approves and certifies their fitness to wear respiratory protection. May aggravate an existing digestive condition, respiratory disorder, renal condition, nervous system condition, or blood system disorder. May aggravate skin conditions.

## CARCINOGENICITY

OSHA: No

ACGIH: No

NTP: No

IARC: Group 2B (possibly carcinogenic to humans)

**SECTION 2 NOTES:** There are no known human carcinogenic effects related to PAH content of carbon blacks.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component/CAS NO.	ACGIH Limits	OSHA Limits
<b>HAZARDOUS COMPONENTS</b>		
<u>POLYCHLOROPRENE RUBBER POLYMER:</u>		
<i>The following potentially hazardous ingredient(s) are contained at levels below disclosure requirements and are provided for informational purposes only. The concentrations reported below in units of parts per million (ppm) or parts per billion (ppb) are maximum values.</i>		
Styrene Butadiene Rubber (9003-55-8)	Not Established	Not Established
Ethylene-Propylene-Ethylidene-Norbornene Hydrocarbon Elastomer (EPDM: 25038-36-2)	Not Established	Not Established
Ethylidene Norbornene (ENB) 16219-75-3	5 ppm STEL 25 mg/m3 STEL	Not Established
Ethylene Propylene Copolymer Particulates Not Other Classified (PNOC)	3 mg/m3 TWA (Respirable Fraction) 10 mg/m3 TWA (Total Dust)	15 mg/m3 TWA (Total Dust) 5 mg/m3 TWA (Respirable Dust)
Carbon Black 1333-86-4 (NIOSH-Ca) (IARC-2B) (MAK-3B) (TLV-A4)	3.5 mg/m3 TWA	3.5 mg/m3 TWA
Heavy Napthenic (64742-52-5)	5 mg/m3 TWA (Oil Mist) 10 mg/m3 STEL (Oil Mist)	5 mg/m3 TWA (Oil Mist)
Vulcanization System Vendor Trade Secret	Not Established	Not Established

\* ACGIH® believes that even biologically inert, insoluble, or poorly soluble particles may have adverse effects and recommends that airborne concentrations be kept below the asterisk value.

R – Measured as respirable fraction of the silica

EPA-D: Not Classifiable as to Human Carcinogenicity: Inadequate human and animal evidence of carcinogenicity or no data are available.

IARC-3: Unclassifiable as to Carcinogenicity in Humans. This category is used most commonly for agents, mixtures, and exposure circumstances for which the evidence of carcinogenicity is inadequate in humans and inadequate or limited in experimental animals. Exceptionally, agents (mixtures) for which the evidence of carcinogenicity is inadequate in humans but sufficient in experimental animals may be placed in this category when there is strong evidence that the mechanism of carcinogenicity in experimental animals does not operate in humans. Agents, mixtures, and exposure circumstances that do not fall into any other group are also placed in this category.

IARC-2B: Possibly Carcinogenic to Humans. The exposure circumstance entails exposures that are possibly carcinogenic to humans. This category is used for agents, mixtures, and exposure circumstances for which there is limited evidence of carcinogenicity in humans and less than sufficient evidence of carcinogenicity in experimental animals. It may also be used when there is inadequate evidence of carcinogenicity in humans but there is sufficient evidence of carcinogenicity in experimental animals. In some instances, an agent, mixture, or exposure



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circumstance for which there is inadequate evidence of carcinogenicity in humans but limited evidence of carcinogenicity in experimental animals together with supporting evidence from other relevant data may be placed in the group.

**MAK-3B:** Substances for which *in vitro* tests or animal studies have yielded evidence of carcinogenic effects that is not sufficient for classification of the substance in one of the other categories. Further studies are required before a final classification can be made. A MAK or BAT value can be established, provided no genotoxic effects have been detected.

**NIOSH-Ca:** Potential occupational carcinogen, with no further categorization.

**TLV-A4:** Not classifiable as a Human Carcinogen: Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of a lack of data. *In vitro* or animal studies do not provide indications of carcinogenicity, which are sufficient to classify the agent into one of the other categories.

**NTP-R:** Reasonably Anticipated To Be A Human Carcinogen (RAHC) – There is limited evidence of carcinogenicity from studies in humans, which indicates that causal interpretation is credible, but that alternative explanations, such as chance, bias or confounding factors, could not adequately be excluded.

**SECTION 3 NOTES:** These hazardous components are dispersed within the polymer bound matrix of the material which generally precludes the possibility of airborne dust of the component. It also eliminates the problems generally associated with the powder or liquid form of the component. Components are not expected to become airborne during normal use of this material as long as good industrial hygiene and safety procedures are practiced. Several of the ingredients contained within this material have not been evaluated to determine potential exposure hazards by OSHA or ACGIH.

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## SECTION 4: FIRST AID MEASURES

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**EYES:** In case of contact, flush eyes with large quantities of water for at least 15 minutes. If the victim is wearing contact lenses, remove them. The eyelids should be held apart during irrigation to ensure thorough flushing of all eye tissue. DO NOT let victim rub eye(s). Do not attempt to neutralize with chemical agents. Oils or ointments should not be used at this time. Get medical attention if irritation develops or persists. Continue flushing for an additional 15 minutes if a physician is not immediately available.

**SKIN:** Remove contaminated clothing and equipment. Wash all affected areas with plenty of soap and water for at least 15 minutes. DO NOT attempt to neutralize with chemical agents. Wash clothing and clean shoes before reuse. In case of skin contact, wash affected areas with soap and water. Get medical attention if irritation develops or persists.

**INGESTION:** Call a physician immediately. If vomiting occurs, keep head below hips to reduce the risk of aspirations. Never give anything by mouth to an unconscious person. If the victim is unconscious, monitor pulse, breathing and airway. If breathing stops, begin artificial respiration immediately. If the heart has stopped, give cardiopulmonary resuscitation (CPR). Get medical attention immediately.

**INHALATION:** Can be mechanically irritating. Excessive inhalation of product vapors, especially during heating or processing, may be irritating to respiratory system. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.

**NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:** Persons with pre-existing skin disease may be at an increased risk if exposed dermally to this material. No specific antidote is known. Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical conditions.

## SECTION 4 NOTES:

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## SECTION 5: FIRE-FIGHTING MEASURES

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### FLAMMABLE LIMITS IN AIR, (% BY VOLUME)

UPPER: Not Available

LOWER: Not Available

FLASH POINT: > 100 °C

> 212 °F

METHOD USED: SW 846 1010

BURN RATE SCREEN: Negative

EPA METHOD: SW 846 1030

### NFPA HAZARD CLASSIFICATION

HEALTH: 0

FLAMMABILITY: 1

REACTIVITY: Not Available

OTHER:



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## HMIS HAZARD CLASSIFICATION

HEALTH: 0

FLAMMABILITY: 1

PHYSICAL HAZARD: 0

PROTECTION: B

**EXTINGUISHING MEDIA:** Dry Chemical, CO2, Foam

**FIREFIGHTING PROCEDURE:** Evacuate area and fight fire from safe distance. Wear pressure-demand self-contained breathing apparatus (MSHA/NIOSH-approved or equivalent) and full protective gear.

**SPECIAL FIRE FIGHTING PROCEDURES:** As with any fire, toxic gases, vapors, and fumes can be generated. Use pressure-demand self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear. Using water can cause frothing with increasing fire intensity.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Not known

**HAZARDOUS DECOMPOSITION PRODUCTS:** Not known

**SECTION 5 NOTES:**

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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**ACCIDENTAL RELEASE MEASURES:** Recover spilled material and place in suitable containers for recycle or disposal. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations. Keep unnecessary personnel out of spill area. Emergency clean-up personnel should wear appropriate protection when entering the spill area for clean up. Remove mechanically by method, which minimizes generation of airborne dust, and place in appropriately marked containers for disposal. Do not allow spilled or released material to enter ground water, waste water or soil.

**SECTION 6 NOTES:**

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## SECTION 7: HANDLING AND STORAGE

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**HANDLING AND STORAGE:** Skin and eye contact should be avoided as good industrial practice. Wearing of protective gloves and eye protection is recommended. Wash hands and contaminated skin area after handling. Follow all warnings and precautions even after container is emptied. Wash thoroughly after handling or at the end of the shift.

**OTHER PRECAUTIONS:** Store in cool dry place away from strong oxidizers and acids. Keep container tightly closed when not in use. All handling equipment should be properly grounded to prevent the build-up of electrostatic charges. Storage area should be equipped with sprinkler system. Handle in accordance with good industrial hygiene and safety practices.

**SECTION 7 NOTES:**

Containers should not be opened until ready for use. Use clean non-sparking equipment and tools when handling.

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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**ENGINEERING CONTROLS:** Use in a well-ventilated area.

**VENTILATION:** Local exhaust must always be provided to draw dust, fumes and vapors away from workers to prevent routine inhalation.

**RESPIRATORY PROTECTION:** Use a NIOSH/MSHA approved air purifying respirator as needed to control exposure. Consult with respirator manufacturer to determine respirator selection, use, and limitations. Use a positive pressure air supplied respirator for uncontrolled releases or when air purifying respirator limitations may be exceeded. Follow respiratory protection program requirements (OSHA 1910.134 and ANSI Z88.2) for all respirator use.

**EYE PROTECTION:** Use safety glasses with side shields. Where contact with the eyes is likely, use chemical goggles. Use a face shield as needed.

**SKIN PROTECTION:** Use impervious gloves. Use clean protective body-covering clothing as needed to minimize contact with clothing and skin

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT:** Wear appropriate personal protection during cleanup, such as impervious gloves, boots and coveralls.

**WORK HYGIENIC PRACTICES:** Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees on the safe use and handling of this product.

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EXPOSURE GUIDELINES: Keep spill contents out of sewers, storm drains, surface waters, and soils. Make sure all waste disposal methods are in accordance with local, state, and federal regulations.

## SECTION 8 NOTES:

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### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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APPEARANCE: Black

ODOR: Mild

PHYSICAL STATE: Solid

DENSITY: 1.26 g/cm<sup>3</sup>

pH AS SUPPLIED:

pH (Other): Not Available

BOILING POINT: Not Available

MELTING POINT: Not Available

FREEZING POINT: Not Available

VAPOR PRESSURE (mmHg): Not Available

EVAPORATION RATE: Not Available

BASIS (=1): Not Available

SOLUBILITY IN WATER: Not Soluble

PERCENT SOLIDS BY WEIGHT: 75%

PERCENT VOLATILE: Not Available

BY WT/ BY VOL @ F:

VOLATILE ORGANIC COMPOUNDS (VOC): Not Available

WITH WATER:	LBS/GAL
WITHOUT WATER:	LBS/GAL

MOLECULAR WEIGHT: Not Available

VISCOSITY: Not Available

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### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (Continued)

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## SECTION 9 NOTES:

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### SECTION 10: STABILITY AND REACTIVITY

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STABILITY: Stable

CONDITIONS TO AVOID (STABILITY): Keep away from extreme heat, sparks or open flame and strong oxidizing conditions.

INCOMPATIBILITY (MATERIAL TO AVOID): Strong acids, Bases and oxidizing agents

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Products of incomplete combustion may include CO, CO<sub>2</sub>, and dense smoke.

HAZARDOUS POLYMERIZATION: Not expected to occur.

CONDITIONS TO AVOID (POLYMERIZATION):

## SECTION 10 NOTES:



# SAFETY DATA SHEET

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## SECTION 11: TOXICOLOGICAL INFORMATION

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**TOXICOLOGICAL INFORMATION:** Any health or toxicological information included in Section 3 was based on data associated with the components used in manufacturing this product.

SECTION 11 NOTES:

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## SECTION 12: ECOLOGICAL INFORMATION

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**ECOLOGICAL INFORMATION:** Do not allow to enter soil, waterways, or wastewater.

SECTION 12 NOTES:

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## SECTION 13: DISPOSAL CONSIDERATIONS

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**WASTE DISPOSAL METHOD:** It is the responsibility of the individual using this product to follow all local, State and Federal regulations for the proper disposal of this product and containers.

**RCRA HAZARD CLASS:** It is the responsibility of the user to determine if this material is a RCRA Hazardous Waste at the time of disposal.

SECTION 13 NOTES:

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## SECTION 14: TRANSPORT INFORMATION

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### U.S. DEPARTMENT OF TRANSPORTATION

**PROPER SHIPPING NAME:** Not Regulated  
**HAZARD CLASS:** Not Regulated  
**ID NUMBER:** Not Regulated  
**PACKING GROUP:** Not Regulated  
**LABEL STATEMENT:** Not Regulated

### WATER TRANSPORTATION

**PROPER SHIPPING NAME:** Not Regulated  
**HAZARD CLASS:** Not Regulated  
**ID NUMBER:** Not Regulated  
**PACKING GROUP:** Not Regulated  
**LABEL STATEMENTS:** Not Regulated

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## SECTION 14: TRANSPORT INFORMATION (Continued)

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### AIR TRANSPORTATION

**PROPER SHIPPING NAME:** Not Regulated  
**HAZARD CLASS:** Not Regulated  
**ID NUMBER:** Not Regulated  
**PACKING GROUP:** Not Regulated  
**LABEL STATEMENTS:** Not Regulated

**OTHER AGENCIES:** None

SECTION 14 NOTES:

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## SECTION 15: REGULATORY INFORMATION

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### U.S. FEDERAL REGULATIONS

**TSCA (TOXIC SUBSTANCE CONTROL ACT):**

**CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT):**

**SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):**

**311/312 HAZARD CATEGORIES:** No Hazard categories identified.

**313 REPORTABLE INGREDIENTS:** Zinc Compounds

# SAFETY DATA SHEET

SDS DATE: 07/30/2015

STATE REGULATIONS:

INTERNATIONAL REGULATIONS:

SECTION 15 NOTES:

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## SECTION 16: OTHER INFORMATION

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### PREPARATION INFORMATION:

**DISCLAIMER:** Information presented herein has been compiled from sources considered to be accurate and dependable to the best of our knowledge and belief but is not guaranteed to be so. Nothing herein is to be construed as recommending any practice or any product in violation of any law or regulation. It is the user's responsibility to determine the suitability of any material for a specific purpose and to adopt such safety precautions as necessary. Since conditions of use are not under our control, we must disclaim all liability with respect to the use and disposal of our products.



AMERICAN HYDROTECH, INC.  
303 East Ohio Street  
Chicago, Illinois 60611  
(312) 337-4998 06/10

GardNet

## SECTION I

CHEMICAL NAME & SYNONYMS: N.A.  
CHEMICAL FAMILY: Polyolefin  
TRADE NAME & SYNONYMS: Soil Confinement Assembly  
FORMULA: N.A.

## SECTION II – HAZARDOUS INGREDIENTS

<u>INGREDIENT</u>	<u>C.A.S. #</u>	<u>%</u>	<u>TLV EXPOSURE LIMITS</u>
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This product does not meet the definition of a hazardous material given in 29 CFR Part 1910.1200 (OSHA). Information furnished as a customer service.

## SECTION III – PHYSICAL DATA

BOILING POINT (°F):	N. App.	MELTING POINT: (°F)	250-270
VAPOR PRESSURE (mmHg @ 20°C):	N. App.	PERCENT VOLATILE BY VOLUME:	N.App.
VAPOR DENSITY (AIR=1):	N.App.	EVAPORATION RATE (BUTYL ACETATE=1):	N.App.
SPECIFIC GRAVITY (H <sub>2</sub> O=1):	0.91 – 0.96		

SOLUBILITY IN WATER: Insoluble  
APPEARANCE AND ODOR: Black polymer strips, welded into cellular net. No odor.

## SECTION IV – FIRE AND EXPLOSION HAZARDS

FLASH POINT (METHOD USED): Greater than 400°F (cleveland open cup)  
FLAMMABLE LIMITS: N.App.

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical foam, water spray  
SPECIAL FIRE FIGHTING PROCEDURES: Respiratory and eye protection for fire fighting personnel.  
UNUSUAL FIRE/EXPLOSION HAZARDS: Combustion may produce carbon monoxide and irritating smoke.

**SECTION V – HEALTH HAZARD DATA**

THRESHOLD LIMIT VALUE(S): No OSHA PEL for this mixture.

Particulates not otherwise regulated (dust): 15 mg/m<sup>3</sup> total dust; 5 mg/m<sup>3</sup> respirable dust.

No ACGIH TLV for this mixture.

Particulates not otherwise regulated (dust): 10 mg/m<sup>3</sup> total dust.

FOR OVEREXPOSURE BY:

EYES: This product is an inert solid. If in eye, remove as one would any foreign object.

SKIN: If contacted by molten polymer, immediately flush area with large amounts of water. Call for prompt medical attention.

INHALATION: In case of adverse exposure to fumes formed at elevated temperatures, immediately remove the individual from exposure. If breathing has stopped, give immediate artificial respiration. Call for prompt medical attention.

INGESTION: This product is not known to be harmful by oral ingestion.

**SECTION VI – REACTIVITY DATA**

STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID: May burn or react violently with fluorine/oxygen mixtures. May be decomposed by strong oxidizing agents such as nitric and sulfuric acids, and chlorinating agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition products may include CO, CO<sub>2</sub>, and organic vapors

**SECTION VII – SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Solid material, normal clean-up procedures

WASTE DISPOSAL METHODS: Dispose of in accordance with all applicable federal, state and local guidelines. Product does not meet definition of hazardous waste.

**SECTION VIII – SPECIAL PROTECTION INFORMATION DURING INSTALLATION**

VENTILATION (TYPE): None required.

RESPIRATORY PROTECTION: None required.

PROTECTIVE CLOTHING & EQUIPMENT: Typical protective clothing for construction related activities.

**SECTION IX – SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: No special requirements

*Information presented herein has been compiled from sources considered to be dependable and current, and is accurate and reliable to the best of our knowledge, but is not guaranteed to be so. It is the user's responsibility to determine for himself the suitability of this information for his safe use of this product, and to adopt such proper safety precautions as may be necessary to provide adequate worker and plant protection.*



AMERICAN HYDROTECH, INC.

## SAFETY DATA SHEET

### Hydrocap 90FR

Notice: New GHS Standard Requirements  
Material Safety Data Sheets (MSDS) / Safety Data Sheets (SDS)

The OSHA Hazard Communication Standard (29 CFR 1910.1200) was recently updated to require that Material Safety Data Sheets (MSDS) for hazardous chemical products be updated by June 1, 2015 to meet the updated Globally Harmonized System of Classification and Labeling of Chemicals (GHS) format and content requirements for Safety Data Sheets (SDS).

**Hydrocap 90FR** supplied by American Hydrotech are not classified as a hazardous chemical under the 1910.1200 rule. **Hydrocap 90FR** meet the OSHA definition of manufactured “articles” (1910.1200(c)) that will not expose users to hazardous chemicals under normal and expected conditions of use, and are therefore exempt from all requirements of the rule, including the requirement to produce an SDS (1910.1200(b)(6)(v)).

American Hydrotech will continue to provide product data sheets for each of our products. However, effective immediately we will no longer provide SDS for those products that are not classified as hazardous chemicals as outlined in the new GHS standard.

For more information on OSHA Hazard Communication Standard (29 CFR 1910.1200), please visit [www.osha.gov](http://www.osha.gov).



AMERICAN HYDROTECH, INC.

## SAFETY DATA SHEET

### Hydrocap 160FR

Notice: New GHS Standard Requirements  
Material Safety Data Sheets (MSDS) / Safety Data Sheets (SDS)

The OSHA Hazard Communication Standard (29 CFR 1910.1200) was recently updated to require that Material Safety Data Sheets (MSDS) for hazardous chemical products be updated by June 1, 2015 to meet the updated Globally Harmonized System of Classification and Labeling of Chemicals (GHS) format and content requirements for Safety Data Sheets (SDS).

**Hydrocap 160FR** supplied by American Hydrotech are not classified as a hazardous chemical under the 1910.1200 rule. **Hydrocap 160FR** meet the OSHA definition of manufactured “articles” (1910.1200(c)) that will not expose users to hazardous chemicals under normal and expected conditions of use, and are therefore exempt from all requirements of the rule, including the requirement to produce an SDS (1910.1200(b)(6)(v)).

American Hydrotech will continue to provide product data sheets for each of our products. However, effective immediately we will no longer provide SDS for those products that are not classified as hazardous chemicals as outlined in the new GHS standard.

For more information on OSHA Hazard Communication Standard (29 CFR 1910.1200), please visit [www.osha.gov](http://www.osha.gov).

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**AMERICAN HYDROTECH, INC.**  
303 East Ohio Street, Suite 2700, Chicago, IL 60611  
842-337-4998  
842-661-0731

Drain products, systems, and components are considered “article

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AMERICAN HYDROTECH, INC



# HYDRODRAIN

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aáëéçë~äWkí=ÉñéÉ=ÂçåÑçêãáíó=íáíÜ=~ää=~ééääÁ~ÄáÉ=Çáëéçë~ä=éÉÇíÄííÇçèK=äçåãÉÉí=íÜÉ=ÇÉÑáääíáçå=çÑ=Ü~ò~êÇçìèí~éíÉK

pÉÁíáçå=NQ=ä~äpéçêí=fåÑçêã~íáçå

alq=`ä~ëëáÑáÂ~íáçåWkí=éÉÖìä~íÉÇ  
mêçéÉë=pÜáééääÖ=k~äEWkí=éÉÇ=êçääë=çÑ=ÂçäéçëáíÉ=Çê~ää~ÖÉ=ä~íÉêä~äK==kçí=éÉÖìä~íÉÇK

pÉÁíáçå=NR=J=oÉÖìä~íçêó=fåÑçêã~íáçå

rp^ =qp`^Wkí=ÉñéÉÇíÁí=áë=ÂçääéÇÉêÉÇ=~ä=~éíáÄáÉ=~äÇ=äççí=ÉñéÉÇíÁí=áë=äçí=ééÉÄáÑáÉÇ=çåçåK  
`~ä~Ç~=açãÉëíáÂ=piÄëí~äÄÉë=íäëí=EapiFWkí=éÉÇíÁí=áë=äçí=ééÉÄáÑáÉÇ=çåçåK

p^o^ =qfqib=fffW=  
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p^o^ =EPNPNOF=e~ò~êÇ=ä~ëëW=kçåÉ=ääéíÉÇ  
p^o^ =EPNPF=ÜÉääÄ~äëW=kçåÉ=ääéíÉÇ

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`^k^a^ =obdri^ qflkp=EtejfpFW=kçí=ääéíÉÇ

pÉÁíáçå=NS=J=ííÜÉê=ääÑçêã~íáçå

a~íÉ=mêÉé~éÉÇ=çê=oÉíáëÉÇW=j~ó=Nëí=OMNR

The information contained herein is believed by American Hydrotech, Inc. to be accurate and is offered solely for the customer's consideration, investigation and verification. Determination of suitability for use is the responsibility of the user. Hydrotech's Limitations, Limited Warranty, & Disclaimer along with Standard Terms & Conditions apply. See [www.hydrotechusa.com](http://www.hydrotechusa.com) for more info. **Limitations:** Hydrodrain is resistant to chemicals in normal soil environments. However, some reagents may affect the performance of Hydrodrain. A Hydrotech representative should be contacted for further information to determine the suitability of use of Hydrodrain in unusual soil environments. Hydrodrain should be limited to its exposure to ultra-violet sunlight. Hydrodrain should be backfilled or covered within 7 days of installation. **Disclaimer:** All information, drawings and specifications are based on the latest published information at the time of printing. Hydrotech reserves the right to make changes due to manufacturing improvements and engineering at any time. All physical properties are minimum average roll values (MARV). Standard variations of 10% in mechanical properties and 15% in hydraulic properties are normal.

American Hydrotech, Inc.

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# SAFETY DATA SHEET

## HYDROFLEX 10 or 30

### SECTION 1 IDENTIFICATION

<b>Product Name</b>	Hydroflex protection sheet
<b>Product Identifier</b>	Mixture of asphalt, Polypropylene, Talc Stabilizer, Calcium Carbonate, Polyester Mat, Silica Crystalline parting agents
<b>Recommended Use</b>	APP Modified Bitumen Roofing Base/Ply Sheet
<b>Restrictions</b>	None
<b>Supplier Address</b>	American Hydrotech, Inc. 541 N. Fairbanks Chicago, IL 60611
<b>Phone Number</b>	(800) 877-6125
<b>Emergency Number</b>	(800) 633-8253 (PERS #11540)

### SECTION 2 HAZARDS

<b>GHS Classification</b>	H372
<b>Hazard Pictographs</b>	
<b>Signal Word</b>	<b>DANGER</b>
<b>Hazard Statements</b>	H372 - Causes damage to organs (central nervous system, eye, skin, lung, liver) through prolonged or repeated exposure (dermal, inhalation)
<b>Precautionary Statements</b>	P260 - Do not breathe fume, gas, vapors P264 - Wash hands, forearms and face thoroughly after handling P270 - Do not eat, drink or smoke when using this product P280 - Wear protective gloves and clothing P314 - Get medical advice/attention if you feel unwell P501 - Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste

### SECTION 3 COMPOSITION

#### Chemical Composition

COMPONENT	CAS NUMBER	PERCENT BY WEIGHT
Petroleum Asphalt	8052-42-4	50 - 70
Polypropylene	9003-07-0	12 - 22
Talc Stabilizer	14807-96-6	0 - 10
Calcium Carbonate	1317-65-3	5 - 23
Fiberglass Mat	65997-17-3	5 - 25
Silica, crystalline	14808-60-7	3 - 25
Dry Talc Dusting	14807-96-6	3 - 15

**Note:** The above components and their percentages are provided for health and safety purposes, ONLY. This document should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

# **SAFETY DATA SHEET**

## **HYDROFLEX 10 or 30**

### **SECTION 4 FIRST AID MEASURES**

<b>Eyes</b>	If foreign matter enters eyes, immediately flush with large amounts of potable water for at least 15 minutes or until irritation subsides. Get medical attention if irritation persists.
<b>Skin</b>	Remove contaminated clothing and wash with soap and water.
<b>Inhalation</b>	Remove affected person from source of exposure. If not breathing, institute cardiopulmonary resuscitation (CPR). If breathing is difficult, give oxygen. Get medical attention.
<b>First-Aid, Ingestion</b>	Consult a physician if unusual reaction is noted. Product is not intended nor is it likely to be ingested or eaten.
<b>Symptoms, Acute &amp; Delayed</b>	Refer to Section 11 - Toxicological Information
<b>Immediate Medical Attention</b>	All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials

### **SECTION 5 FIRE FIGHTING MEASURES**

<b>Flash Point</b>	> 520-650°F (ASTM D92) <b>LEL:</b> 1% <b>UEL:</b> 6%
<b>Hazardous Products of Combustions</b>	Carbon dioxide, carbon monoxide and partially burned carbon
<b>Extinguishing Media</b>	Foam CO <sub>2</sub> or dry chemical extinguishers.
<b>Firefighting instruction</b>	Burning of this product will produce thick black smoke.
<b>Explosion Hazard</b>	None
<b>Protection Gear</b>	Firefighters should wear full face, self contained breathing apparatus and impervious protective clothing to avoid smoke inhalation and lack of oxygen.

### **SECTION 6 ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions</b>	No special precautions should be necessary if material is used under ordinary conditions and as recommended.
<b>Personal Precautions</b>	No emergency procedures should be necessary if material is used under ordinary conditions as recommended.
<b>Environmental Precautions</b>	Avoid run off to waterways and sewers.
<b>Method and Materials for Containment &amp; Clean Up</b>	Pick up large pieces. Vacuum dust. If sweeping is necessary, use a dust suppressant such as water. These procedures will help to minimize potential exposures. Scoop up material and put into a suitable container for disposal as a nonhazardous waste.

### **SECTION 7 HANDLING AND STORAGE**

<b>Handling</b>	Use this product with adequate ventilation. Avoid breathing dusts or fumes generated from cutting or heating this material. Always wash work clothes separately from other clothing. Wash thoroughly after handling. Use personal protective equipment as described in Section 8.
<b>Storage</b>	Keep containers cool, dry and away from sources of ignition. <b>DO NOT STORE NEAR HEAT, SPARKS, FLAME, OTHER SOURCES OF IGNITION OR STRONG OXIDIZERS.</b>

# SAFETY DATA SHEET

## HYDROFLEX 10 or 30

### SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

<b>Eye</b>	Safety glasses with side shields should be worn at a minimum.
<b>Skin</b>	Normal work clothing (long sleeved shirts, long pants and smooth bottom work shoes) is recommended.
<b>Respiratory</b>	Use NIOSH or MSHA approved respiratory protective equipment when airborne exposure limits are exceeded.
<b>Ventilation</b>	Ventilation may be used to reduce airborne concentrations. If ventilation can not reduce airborne concentrations below acceptable limits, appropriate respiratory protection should be used.
<b>Work/Hygienic Practices</b>	Wash hands after application

### Occupational Exposure Limits

COMPONENT	CAS NUMBER	OSHA PEL	ACGIH TLV	NIOSH REL
Petroleum Asphalt	8052-42-4	Not Established	0.5 mg/m <sup>3</sup> TWA (respirable)	0.5 mg/m <sup>3</sup> Ceiling (15 min)
Polypropylene	9003-07-0	5 mg/m <sup>3</sup> (respirable)	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup> TWA
Talc	14807-96-6	20 mppcf*	2 mg/m <sup>3</sup> TWA (respirable)	2 mg/m <sup>3</sup> TWA
Calcium Carbonate	1317-65-3	5 mg/m <sup>3</sup> (respirable) 15 mg/m <sup>3</sup> (total)	10 mg/m <sup>3</sup> TWA	5 mg/m <sup>3</sup> TWA
Fiberglass Mat	65997-17-3	15 mg/m <sup>3</sup>	Not Established	3 mg/m <sup>3</sup> TWA 5 mg/m <sup>3</sup> (total)
Silica, crystalline	14808-60-7	10 mg/m <sup>3</sup> (respirable) 30 mg/m <sup>3</sup> (total)	Not Established	3 mg/m <sup>3</sup> TWA 5 mg/m <sup>3</sup> (total)

\*Million particles per cubic foot

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Solid
<b>Appearance</b>	Polyester reinforced, APP polymer modified asphaltic material
<b>Odor</b>	Slight asphalt odor
<b>Odor Threshold</b>	No data available
<b>pH</b>	No data available
<b>Relative Evaporation Rate</b>	No data available
<b>Boiling Point</b>	> 900°F; > 482°C
<b>Freezing Point</b>	No data available
<b>Flash Point</b>	520-650°F; 271 - 343°C
<b>Auto-ignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Specific Gravity (H<sub>2</sub>O =1)</b>	0.9 - 1.1
<b>Vapor pressure</b>	< 0.1
<b>Vapor Density (AIR=1)</b>	> 20
<b>Solubility in Water</b>	NIL

# SAFETY DATA SHEET

## HYDROFLEX 10 or 30

### SECTION 10 STABILITY AND REACTIVITY

<b>Stability</b>	Stable at room temperature in closed containers under advised storage and handling conditions.
<b>Reactivity</b>	Upon combustion CO and CO <sub>2</sub> are formed
<b>Conditions to Avoid</b>	Strong oxidizers, no spark or open flame, direct sunlight and high temperatures
<b>Hazardous Decomposition</b>	Carbon monoxide, carbon dioxide, hydrogen sulfide and sulfur dioxide
<b>Hazardous Polymerization</b>	Will not occur

### SECTION 11 TOXICOLOGICAL INFORMATION

<b>Mutagenicity</b>	May cause genetic defects (dermal, inhalation)
<b>Carcinogenicity</b>	May cause cancer (dermal, inhalation)
<b>Specific Target Organ Toxicity</b>	Causes damage to organs (central nervous system, eye, skin lung and liver) through prolonged or repeated exposure.
<b>Chronic Effects</b>	Prolonged and repeated skin contact may cause dermatitis, photo-sensitization and melanosis.
<b>Potential Adverse Human Health Effects</b>	Based on available data, the classification criteria are not met.

### SECTION 12 ECOLOGICAL INFORMATION

<b>Toxicity</b>	Employ best management practices to prevent this material from entering storm sewer systems, waterways or otherwise impacting plant and animal species.
<b>Environmental Transport</b>	No Data
<b>Environment Degradation</b>	No Data
<b>Soil Absorption/Mobility</b>	No Data

### SECTION 13 DISPOSAL CONSIDERATIONS

<b>Product Waste</b>	The transportation, storage, treatment and dispose of this waste must be conducted in accordance with all applicable federal, state and local regulations.
<b>Packaging Waste</b>	The transportation, storage, treatment and dispose of this waste must be conducted in accordance with all applicable federal, state and local regulations.

### SECTION 14 TRANSPORT INFORMATION

<b>Transportation Regulations</b>	This product is not regulated as a hazardous material in transportation.
<b>National Motor Freight Classification (NMFC)</b>	Class 55

# SAFETY DATA SHEET

## HYDROFLEX 10 or 30

### SECTION 15 REGULATORY INFORMATION

<b>TSCA Inventory</b>	Components are listed
<b>DSL Inventory</b>	Components are listed
<b>WHMIS Classification</b>	Class D, Division 2
<b>Sara 313</b>	None present
<b>Sara 311/312 Categories</b>	Acute Health Hazard; Chronic Health Hazard
<b>CERCLA</b>	None present
<b>CA Proposition 65</b>	This product may contain chemicals known to the state of California to cause cancer, birth defects, and/or other reproductive harm.

### Right to Know States

COMPONENT	CAS NUMBER	CA	MA	MN	NJ	PA	RI
Petroleum Asphalt	8052-42-4	No	Yes	No	Yes	Yes	Yes
Polypropylene	9003-07-0	No	No	No	Yes	Yes	No
Talc	14807-96-6	Yes	Yes	Yes	Yes	Yes	No
Calcium Carbonate	1317-65-3	No	Yes	Yes	No	Yes	Yes
Fiberglass Mat	65997-17-3	Yes	No	Yes	Yes	Yes	Yes
Silica, crystalline	14808-60-7	Yes	Yes	Yes	Yes	Yes	Yes

### SECTION 16 OTHER INFORMATION

This material has been defined as a hazardous chemical under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

COMPONENT	HEALTH	FIRE	REACTIVITY
NFPA Rating	1	1	0
HMIS Rating	1	1	0

*Reason for revision: Solvent Change & updated hazard information*

The information and recommendations contained herein are to the best of DERBIGUM Americas' knowledge and belief, accurate and reliable as of the date issued. DERBIGUM Americas does not warrant or guarantee their accuracy or reliability, and DERBIGUM Americas shall not be liable for any loss or damage arising out of the use thereof.

The information and recommendations are offered for the users consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use. It is also the users responsibility to make certain that it is relying upon the most recent, updated, information and recommendations available from DERBIGUM Americas.

The Environmental Information included, as well as the Hazardous Material Identification System (HMIS) and National Fire Protection Association (NFPA) ratings, have been included by DERBIGUM Americas in order to provide additional health and hazard classification information. The ratings recommended are based upon the criteria supplied by the developers of these rating systems, together with DERBIGUM Americas' interpretation of the available data.


# SAFETY DATA SHEET

## HYDROFLEX 10 or 30

### SECTION 1 IDENTIFICATION

<b>Product Name</b>	Hydroflex protection sheet
<b>Product Identifier</b>	Mixture of asphalt, Polypropylene, Talc Stabilizer, Calcium Carbonate, Polyester Mat, Silica Crystalline parting agents
<b>Recommended Use</b>	APP Modified Bitumen Roofing Base/Ply Sheet
<b>Restrictions</b>	None
<b>Supplier Address</b>	American Hydrotech, Inc. 541 N. Fairbanks Chicago, IL 60611
<b>Phone Number</b>	(800) 877-6125
<b>Emergency Number</b>	(800) 633-8253 (PERS #11540)

### SECTION 2 HAZARDS

<b>GHS Classification</b>	H372
<b>Hazard Pictographs</b>	
<b>Signal Word</b>	<b>DANGER</b>
<b>Hazard Statements</b>	H372 - Causes damage to organs (central nervous system, eye, skin, lung, liver) through prolonged or repeated exposure (dermal, inhalation)
<b>Precautionary Statements</b>	P260 - Do not breathe fume, gas, vapors P264 - Wash hands, forearms and face thoroughly after handling P270 - Do not eat, drink or smoke when using this product P280 - Wear protective gloves and clothing P314 - Get medical advice/attention if you feel unwell P501 - Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste

### SECTION 3 COMPOSITION

#### Chemical Composition

COMPONENT	CAS NUMBER	PERCENT BY WEIGHT
Petroleum Asphalt	8052-42-4	50 - 70
Polypropylene	9003-07-0	12 - 22
Talc Stabilizer	14807-96-6	0 - 10
Calcium Carbonate	1317-65-3	5 - 23
Fiberglass Mat	65997-17-3	5 - 25
Silica, crystalline	14808-60-7	3 - 25
Dry Talc Dusting	14807-96-6	3 - 15

**Note:** The above components and their percentages are provided for health and safety purposes, ONLY. This document should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

# **SAFETY DATA SHEET**

## **HYDROFLEX 10 or 30**

### **SECTION 4 FIRST AID MEASURES**

<b>Eyes</b>	If foreign matter enters eyes, immediately flush with large amounts of potable water for at least 15 minutes or until irritation subsides. Get medical attention if irritation persists.
<b>Skin</b>	Remove contaminated clothing and wash with soap and water.
<b>Inhalation</b>	Remove affected person from source of exposure. If not breathing, institute cardiopulmonary resuscitation (CPR). If breathing is difficult, give oxygen. Get medical attention.
<b>First-Aid, Ingestion</b>	Consult a physician if unusual reaction is noted. Product is not intended nor is it likely to be ingested or eaten.
<b>Symptoms, Acute &amp; Delayed</b>	Refer to Section 11 - Toxicological Information
<b>Immediate Medical Attention</b>	All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials

### **SECTION 5 FIRE FIGHTING MEASURES**

<b>Flash Point</b>	> 520-650°F (ASTM D92) <b>LEL:</b> 1% <b>UEL:</b> 6%
<b>Hazardous Products of Combustions</b>	Carbon dioxide, carbon monoxide and partially burned carbon
<b>Extinguishing Media</b>	Foam CO <sub>2</sub> or dry chemical extinguishers.
<b>Firefighting instruction</b>	Burning of this product will produce thick black smoke.
<b>Explosion Hazard</b>	None
<b>Protection Gear</b>	Firefighters should wear full face, self contained breathing apparatus and impervious protective clothing to avoid smoke inhalation and lack of oxygen.

### **SECTION 6 ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions</b>	No special precautions should be necessary if material is used under ordinary conditions and as recommended.
<b>Personal Precautions</b>	No emergency procedures should be necessary if material is used under ordinary conditions as recommended.
<b>Environmental Precautions</b>	Avoid run off to waterways and sewers.
<b>Method and Materials for Containment &amp; Clean Up</b>	Pick up large pieces. Vacuum dust. If sweeping is necessary, use a dust suppressant such as water. These procedures will help to minimize potential exposures. Scoop up material and put into a suitable container for disposal as a nonhazardous waste.

### **SECTION 7 HANDLING AND STORAGE**

<b>Handling</b>	Use this product with adequate ventilation. Avoid breathing dusts or fumes generated from cutting or heating this material. Always wash work clothes separately from other clothing. Wash thoroughly after handling. Use personal protective equipment as described in Section 8.
<b>Storage</b>	Keep containers cool, dry and away from sources of ignition. <b>DO NOT STORE NEAR HEAT, SPARKS, FLAME, OTHER SOURCES OF IGNITION OR STRONG OXIDIZERS.</b>



# SAFETY DATA SHEET

## HYDROFLEX 10 or 30

### SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

<b>Eye</b>	Safety glasses with side shields should be worn at a minimum.
<b>Skin</b>	Normal work clothing (long sleeved shirts, long pants and smooth bottom work shoes) is recommended.
<b>Respiratory</b>	Use NIOSH or MSHA approved respiratory protective equipment when airborne exposure limits are exceeded.
<b>Ventilation</b>	Ventilation may be used to reduce airborne concentrations. If ventilation can not reduce airborne concentrations below acceptable limits, appropriate respiratory protection should be used.
<b>Work/Hygienic Practices</b>	Wash hands after application

### Occupational Exposure Limits

COMPONENT	CAS NUMBER	OSHA PEL	ACGIH TLV	NIOSH REL
Petroleum Asphalt	8052-42-4	Not Established	0.5 mg/m <sup>3</sup> TWA (respirable)	0.5 mg/m <sup>3</sup> Ceiling (15 min)
Polypropylene	9003-07-0	5 mg/m <sup>3</sup> (respirable)	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup> TWA
Talc	14807-96-6	20 mppcf*	2 mg/m <sup>3</sup> TWA (respirable)	2 mg/m <sup>3</sup> TWA
Calcium Carbonate	1317-65-3	5 mg/m <sup>3</sup> (respirable) 15 mg/m <sup>3</sup> (total)	10 mg/m <sup>3</sup> TWA	5 mg/m <sup>3</sup> TWA
Fiberglass Mat	65997-17-3	15 mg/m <sup>3</sup>	Not Established	3 mg/m <sup>3</sup> TWA 5 mg/m <sup>3</sup> (total)
Silica, crystalline	14808-60-7	10 mg/m <sup>3</sup> (respirable) 30 mg/m <sup>3</sup> (total)	Not Established	3 mg/m <sup>3</sup> TWA 5 mg/m <sup>3</sup> (total)

\*Million particles per cubic foot

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Solid
<b>Appearance</b>	Polyester reinforced, APP polymer modified asphaltic material
<b>Odor</b>	Slight asphalt odor
<b>Odor Threshold</b>	No data available
<b>pH</b>	No data available
<b>Relative Evaporation Rate</b>	No data available
<b>Boiling Point</b>	> 900°F; > 482°C
<b>Freezing Point</b>	No data available
<b>Flash Point</b>	520-650°F; 271 - 343°C
<b>Auto-ignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Specific Gravity (H<sub>2</sub>O =1)</b>	0.9 - 1.1
<b>Vapor pressure</b>	< 0.1
<b>Vapor Density (AIR=1)</b>	> 20
<b>Solubility in Water</b>	NIL

# SAFETY DATA SHEET

## HYDROFLEX 10 or 30

### SECTION 10 STABILITY AND REACTIVITY

<b>Stability</b>	Stable at room temperature in closed containers under advised storage and handling conditions.
<b>Reactivity</b>	Upon combustion CO and CO <sub>2</sub> are formed
<b>Conditions to Avoid</b>	Strong oxidizers, no spark or open flame, direct sunlight and high temperatures
<b>Hazardous Decomposition</b>	Carbon monoxide, carbon dioxide, hydrogen sulfide and sulfur dioxide
<b>Hazardous Polymerization</b>	Will not occur

### SECTION 11 TOXICOLOGICAL INFORMATION

<b>Mutagenicity</b>	May cause genetic defects (dermal, inhalation)
<b>Carcinogenicity</b>	May cause cancer (dermal, inhalation)
<b>Specific Target Organ Toxicity</b>	Causes damage to organs (central nervous system, eye, skin lung and liver) through prolonged or repeated exposure.
<b>Chronic Effects</b>	Prolonged and repeated skin contact may cause dermatitis, photo-sensitization and melanosis.
<b>Potential Adverse Human Health Effects</b>	Based on available data, the classification criteria are not met.

### SECTION 12 ECOLOGICAL INFORMATION

<b>Toxicity</b>	Employ best management practices to prevent this material from entering storm sewer systems, waterways or otherwise impacting plant and animal species.
<b>Environmental Transport</b>	No Data
<b>Environment Degradation</b>	No Data
<b>Soil Absorption/Mobility</b>	No Data

### SECTION 13 DISPOSAL CONSIDERATIONS

<b>Product Waste</b>	The transportation, storage, treatment and dispose of this waste must be conducted in accordance with all applicable federal, state and local regulations.
<b>Packaging Waste</b>	The transportation, storage, treatment and dispose of this waste must be conducted in accordance with all applicable federal, state and local regulations.

### SECTION 14 TRANSPORT INFORMATION

<b>Transportation Regulations</b>	This product is not regulated as a hazardous material in transportation.
<b>National Motor Freight Classification (NMFC)</b>	Class 55

# SAFETY DATA SHEET

## HYDROFLEX 10 or 30

### SECTION 15 REGULATORY INFORMATION

<b>TSCA Inventory</b>	Components are listed
<b>DSL Inventory</b>	Components are listed
<b>WHMIS Classification</b>	Class D, Division 2
<b>Sara 313</b>	None present
<b>Sara 311/312 Categories</b>	Acute Health Hazard; Chronic Health Hazard
<b>CERCLA</b>	None present
<b>CA Proposition 65</b>	This product may contain chemicals known to the state of California to cause cancer, birth defects, and/or other reproductive harm.

### Right to Know States

COMPONENT	CAS NUMBER	CA	MA	MN	NJ	PA	RI
Petroleum Asphalt	8052-42-4	No	Yes	No	Yes	Yes	Yes
Polypropylene	9003-07-0	No	No	No	Yes	Yes	No
Talc	14807-96-6	Yes	Yes	Yes	Yes	Yes	No
Calcium Carbonate	1317-65-3	No	Yes	Yes	No	Yes	Yes
Fiberglass Mat	65997-17-3	Yes	No	Yes	Yes	Yes	Yes
Silica, crystalline	14808-60-7	Yes	Yes	Yes	Yes	Yes	Yes

### SECTION 16 OTHER INFORMATION

This material has been defined as a hazardous chemical under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

COMPONENT	HEALTH	FIRE	REACTIVITY
NFPA Rating	1	1	0
HMIS Rating	1	1	0

*Reason for revision: Solvent Change & updated hazard information*

The information and recommendations contained herein are to the best of DERBIGUM Americas' knowledge and belief, accurate and reliable as of the date issued. DERBIGUM Americas does not warrant or guarantee their accuracy or reliability, and DERBIGUM Americas shall not be liable for any loss or damage arising out of the use thereof.

The information and recommendations are offered for the users consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use. It is also the users responsibility to make certain that it is relying upon the most recent, updated, information and recommendations available from DERBIGUM Americas.

The Environmental Information included, as well as the Hazardous Material Identification System (HMIS) and National Fire Protection Association (NFPA) ratings, have been included by DERBIGUM Americas in order to provide additional health and hazard classification information. The ratings recommended are based upon the criteria supplied by the developers of these rating systems, together with DERBIGUM Americas' interpretation of the available data.

# SAFETY DATA SHEET

## HYDROFLEX RB®

### SECTION 1 IDENTIFICATION

**Product Name** Hydroflex RB®  
**Product Identifier** Mixture of asphalt, polypropylene, polyester, filler, and  
**Recommended Use** APP Modified Bitumen Roofing Material  
**Restrictions** None  
**Manufacturer** American Hydrotech, Inc.  
**Address** 303 East Ohio Street  
Chicago, IL 60611  
**Phone Number** (800) 877-6125  
**Emergency Number** (800) 633-8253 (PERS #11540)

### SECTION 2 HAZARDS

**GHS Classification** H372

**Hazard Pictographs**



**Signal Word**

**WARNING**

**Hazard Statements**

H372 - Causes damage to organs (central nervous system, eye, skin, lung, liver) through prolonged or repeated exposure (dermal, inhalation)

**Precautionary Statements**

P260 - Do not breathe fume, gas, vapors  
P264 - Wash hands, forearms and face thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P280 - Wear protective gloves and clothing  
P314 - Get medical advice/attention if you feel unwell  
P501 - Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste

### SECTION 3 COMPOSITION

#### Chemical Composition

COMPONENT	CAS NUMBER	PERCENT BY WEIGHT
Petroleum Asphalt	8052-42-4	50-65
Polypropylene	9003-07-0	14-18
Non-Woven Polyester	64742-88-7	3-8
Filler	1317-65-3	18-25
Copper Hydroxide	20427-59-2	>4

**Note:** The above components and their percentages are provided for health and safety purposes, ONLY. This document should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

# SAFETY DATA SHEET

## HYDROFLEX RB®

### SECTION 4 FIRST AID MEASURES

<b>Eyes</b>	Immediately flush with large amounts of potable water. Eye lids should be held away the eyeball to ensure thorough rinsing. Get medical attention if irritation persists.
<b>Skin</b>	Remove contaminated clothing and wash with soap and water.
<b>Inhalation</b>	Remove affected person from source of exposure. If not breathing, institute cardiopulmonary resuscitation (CPR). If breathing is difficult, give oxygen. Get medical attention.
<b>First-Aid, Ingestion</b>	Consult a physician if unusual reaction is noted. Product is not intended nor is it likely to be ingested or eaten.
<b>Symptoms, Acute &amp; Delayed</b>	Refer to Section 11 - Toxicological Information
<b>Immediate Medical Attention</b>	All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials

### SECTION 5 FIRE FIGHTING MEASURES

<b>Flash Point</b>	> 520-650 °F (ASTM D92) <b>LEL</b> – 1.0% <b>UEL</b> 6.0%
<b>Hazardous Products of Combustions</b>	Carbon dioxide, carbon monoxide and partially burned carbon
<b>Extinguishing Media</b>	Foam CO <sub>2</sub> or dry chemical extinguishers.
<b>Firefighting instruction</b>	Burning of this product will produce thick black smoke.
<b>Explosion Hazard</b>	None
<b>Protection Gear</b>	Do not enter fire area without proper equipment, including respiratory protection.

### SECTION 6 ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	No special precautions should be necessary if material is used under ordinary conditions and as recommended.
<b>Personal Precautions</b>	No emergency procedures should be necessary if material is used under ordinary conditions as recommended.
<b>Environmental Precautions</b>	Avoid run off to waterways and sewers.
<b>Method and Materials for Containment &amp; Clean Up</b>	Pick up large pieces. Vacuum dust. If sweeping is necessary, use a dust suppressant such as water. These procedures will help to minimize potential exposures. Scoop up material and put into a suitable container for disposal as a nonhazardous waste.

### SECTION 7 HANDLING AND STORAGE

<b>Handling</b>	Use this product with adequate ventilation. Avoid breathing dusts or fumes generated from cutting or heating this material. Always wash work clothes separately from other clothing. Wash thoroughly after handling. Use personal protective equipment as described in Section 8.
<b>Storage</b>	Keep containers cool, dry and away from sources of ignition. DO NOT STORE NEAR HEAT, SPARKS, FLAME, OTHER SOURCES OF IGNITION OR STRONG OXIDIZERS.

# SAFETY DATA SHEET

## HYDROFLEX RB®

### SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

<b>Eye</b>	Safety glasses with side shields should be worn at a minimum.
<b>Skin</b>	Normal work clothing (long sleeved shirts, long pants and smooth bottom work shoes) is recommended.
<b>Respiratory</b>	Use NIOSH or MSHA approved respiratory protective equipment when airborne exposure limits are exceeded.
<b>Ventilation</b>	Ventilation may be used to reduce airborne concentrations. If ventilation can not reduce airborne concentrations below acceptable limits, appropriate respiratory protection should be used. '
<b>Work/Hygienic Practices</b>	Wash hands after application

**Note:** All pigments, fillers, fibers and extenders in this product are totally encapsulated and do not pose a respirable dust hazard during installation and use of this product. Components referred to herein, may be regulated by specific Canadian provincial legislation. Please refer to exposure limits legislated for the province in which the substance will be use.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	solid
<b>Appearance</b>	Polyester-reinforced, APP polymer modified asphaltic material
<b>Odor</b>	Slight asphalt odor
<b>Odor Threshold</b>	No data available
<b>pH</b>	No data available
<b>Relative Evaporation Rate</b>	No data available
<b>Boiling Point</b>	> 900 °F; > 482°C
<b>Freezing Point</b>	No data available
<b>Flash Point</b>	520-650 °F
<b>Auto-ignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
<b>Specific Gravity (H<sub>2</sub>O =1)</b>	0.9 - 1.1
<b>Vapor pressure</b>	< 0.1
<b>Vapor Density (AIR=1)</b>	> 20
<b>Density (lb/gal)</b>	<10.0
<b>Solubility in Water</b>	Nil

### SECTION 10 STABILITY AND REACTIVITY

<b>Stability</b>	Stable at room temperature in closed containers under advised storage and handling conditions.
<b>Reactivity</b>	Upon combustion CO and CO <sub>2</sub> are formed
<b>Conditions to Avoid</b>	Strong oxidizers, no spark or open flame, direct sunlight and high temperatures
<b>Hazardous Decomposition</b>	Carbon monoxide, carbon dioxide, hydrogen sulfide and sulfur dioxide
<b>Hazardous Polymerization</b>	Will not occur

# SAFETY DATA SHEET

## HYDROFLEX RB®

### SECTION 11 TOXICOLOGICAL INFORMATION

<b>Mutagenicity</b>	May cause genetic defects (dermal, inhalation)
<b>Carcinogenicity</b>	May cause cancer (dermal, inhalation)
<b>Specific Target Organ Toxicity</b>	Causes damage to organs (central nervous system, eye, skin lung and liver) through prolonged or repeated exposure.
<b>Chronic Effects</b>	Prolonged and repeated skin contact may cause dermatitis, photo-sensitization and melanosis.
<b>Potential Adverse Human Health Effects</b>	Based on available data, the classification criteria are not met.

### SECTION 12 ECOLOGICAL INFORMATION

<b>Toxicity</b>	Employ best management practices to prevent this material from entering storm sewer systems, waterways or otherwise impacting plant and animal species.
<b>Environmental Transport</b>	No Data
<b>Environment Degradation</b>	No Data
<b>Soil Absorption/Mobility</b>	No Data

### SECTION 13 DISPOSAL CONSIDERATIONS

<b>Product Waste</b>	The transportation, storage, treatment and dispose of this waste must be conducted in accordance with all applicable federal, state and local regulations.
<b>Packaging Waste</b>	The transportation, storage, treatment and dispose of this waste must be conducted in accordance with all applicable federal, state and local regulations.

### SECTION 14 TRANSPORT INFORMATION

<b>Transportation Regulations</b>	This product is not regulated as a hazardous material in transportation.
<b>National Motor Freight Classification (NMFC)</b>	

### SECTION 15 REGULATORY INFORMATION

<b>TSCA Inventory</b>	Components are listed
<b>DSL Inventory</b>	Components are listed
<b>WHMIS Classification</b>	Class B, Division 2
<b>Sara Hazard Notification</b>	Not listed on United States SARA Section 313
<b>CA Proposition 65</b>	This product may contain chemicals known to the state of California to cause cancer, birth defects, and/or other reproductive harm.

*Refer to Section 11 for OSHA/HPA Hazardous Chemical(s) and Section 13 for RCRA classification.*

# **SAFETY DATA SHEET**

## **HYDROFLEX RB®**

### **SECTION 16** OTHER INFORMATION

The information and recommendations contained herein are to the best of Hydrotech's knowledge and belief, accurate and reliable as of the date issued. Hydrotech does not warrant or guarantee their accuracy or reliability, and Hydrotech shall not be liable for any loss or damage arising out of the use thereof.

The information and recommendations are offered for the users consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use. It is also the users responsibility to make certain that it is relying upon the most recent, updated, information and recommendations available from Hydrotech.

The Environmental Information included, as well as the Hazardous Material Identification System (HMIS) and National Fire Protection Association (NFPA) ratings, have been included by Hydrotech in order to provide additional health and hazard classification information. The ratings recommended are based upon the criteria supplied by the developers of these rating systems, together with Hydrotech's interpretation of the available data.



# HYDROGUARD

## BALLASTED ROOF INSULATION

### SAFETY DATA SHEET

The Hydroguard ballasted roof insulation is a composite of STYROFOAM® RM brand extruded polystyrene foam thermal insulation with an attached coating of modified latex concrete. We will treat this MSDS as a two-part document covering: (A) the extruded polystyrene foam thermal insulation, and (B) the concrete topping.

#### **(A) STYROFOAM® RM BRAND EXTRUDED POLYSTYRENE THERMAL INSULATION**

##### **1. Product and Company Identification**

*Product Name:* STYROFOAM® ROOFMATE® 2.00 x 24 inch Extruded Foam Roof Insulation (Product Code: 39067, MSD: 006839)

*Manufacturer:* The Dow Chemical Company, Midland, MI 48674 (800-258-2436)  
Emergency Phone: 989-636-4400

##### **2. Composition/Information on Ingredients:**

<u>Chemical Name</u>	<u>CASRN</u>	<u>Concentration</u>
Styrene, polymers	9003-53-6	>=0.0 - <=10%
1,1,1,2-Tetrafluoroethane	811-97-2	>=5.0 - <=10%
2-Propenenitrile, polymer with ethenylbenzene	9003-54-7	>=60.0 - <=100%
Hologenated flame retardant		

This document was prepared pursuant to the OSHA hazard communication standard (29 CFR 1910.1200(g)). In addition, other substances not hazardous per this OSHA standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard. This part of the document has been taken from MSDS information supplied to us from The Dow Chemical Company.

##### **3. Physical and Chemical Properties:**

Boiling Point .....Not Applicable  
Vapor Pressure.....Not Applicable  
Vapor Density .....Not Applicable  
Solubility in water .....None  
Specific Gravity/Density.....0.027 to 0.064  
Appearance.....Blue Rigid Cellular Foam Board  
Odor .....No Odor

##### **4. Fire and Explosion Hazard Data:**

Flash Point .....670°F/354°C Flash Ignition Temperature  
Method Used .....ASTM D1929 Proc. B.  
Flammable Limits LFL.....Not Applicable  
Flammable Limits UFL .....Not Applicable  
Extinguishing Media .....Foam, Water, Carbon Dioxide, Dry Chemical  
Melting Point .....90 - 130°C (194-266°F) Estimated

# HYDROGUARD

## BALLASTED ROOF INSULATION

### SAFETY DATA SHEET

#### 4. Fire and Explosion Hazard Data (continued):

*Hazardous Combustion Products:* In smoldering or flaming conditions, carbon monoxide, carbon dioxide and carbon are generated. Evolution of small amounts of hydrogen halides occurs when burned or heated above 250°C (480°F). Under fire conditions polymers decompose. The smoke may contain polymer fragments of varying compositions in addition to unidentified and/or irritating compounds. Studies have shown that the products of combustion of this foam are not more acutely toxic than the products of combustion of common building materials, such as wood.

*Fire-fighting Instructions:* Keep people away. Isolate fire area and deny unnecessary entry. If material is molten, do not apply direct water stream. Use fine water spray or foam. Soak thoroughly with water to cool and prevent re-ignition. Cool surroundings with water to localize fire zone.

*Protective Fire-fighting Equipment:* Wear positive-pressure, self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots and gloves). If protective equipment is not available or not used, fight fire from protected location or safe distance.

#### 5. Reactivity Data:

*Stability:* Thermally stable at typical use temperatures.

Conditions To Avoid - Avoid direct sunlight. Maximum use temperature is 73°C (165°F). Avoid temperatures over 300°C (572°F). Product can decompose at elevated temperatures.

*Incompatibility with Other Materials:* Avoid contact with oxidizing materials. Avoid contact with aldehydes, amines, esters, liquid fuels, and organic solvents.

*Hazardous Decomposition Products:* Does not normally decompose. Evolution of small amounts of hydrogen halides occurs when heated above 250°C. Under high heat, non-flaming conditions, small amounts of aromatic hydrocarbons such as styrene and ethylbenzene are generated. Hazardous decomposition products depend upon temperature, air supply and the presence of other materials. Hazardous decomposition products may include and are not limited to ethylbenzene, aromatic compounds, aldehydes, hydrogen bromide, hydrogen chloride, hydrogen fluoride, polymer fragments, and styrene.

*Hazardous Polymerization:* Will not occur.

# HYDROGUARD

## BALLASTED ROOF INSULATION

### SAFETY DATA SHEET

#### 6. Health Hazard Data:

*Eye:* Solid or dust may cause irritation or corneal injury due to mechanical action.

*Skin Contact:* Essentially nonirritating to skin. Mechanical injury only. Skin absorption is unlikely due to the physical properties.

*Ingestion:* Single dose oral toxicity is considered to be low. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury. May cause choking or blockage of the digestive tract if swallowed.

#### 6. Health Hazard Data (continued):

*Inhalation:* Dust may cause irritation to the upper respiratory tract (nose and throat). Vapors/fumes released during thermal operations such as hot wire cutting may cause eye and respiratory irritation. Concentrations of the blowing agents anticipated incidental to proper handling are expected to be well below those which cause acute inhalation effects and below exposure guidelines. The LC50 has not been determined.

*Systemic (Other Target Organ) Effects:* Based on available data, repeated exposures to dusts of this material are not anticipated to cause significant adverse effects.

*Cancer Information:* Contains component(s) which did not cause cancer in long-term animal studies.

*Teratology (Birth Defects):* Contains component(s) which did not cause birth defects in laboratory animals. The component(s) is/are 1,1,1,2-Tetrafluoroethane.

*Reproductive Effects:* No relevant information found.

#### 7. First Aid:

*Eyes:* Flush eyes with plenty of water; mechanical effects only.

*Skin:* Wash off in flowing water or shower.

*Ingestion:* If swallowed, seek medical attention. May cause gastrointestinal blockage. Do not give laxatives. Do not induce vomiting unless directed to do so by medical personnel.

*Inhalation:* Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

*Note to Physician:* No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient. Exposure

# HYDROGUARD

## BALLASTED ROOF INSULATION

### SAFETY DATA SHEET

may increase “myocardial irritability.” Do not administer sympathomimetic drugs unless absolutely necessary.

#### 8. **Handling and Storage:**

*Handling:* Maintain good housekeeping. Layers of flammable dusts should not be permitted to accumulate. See Section 10, Exposure Controls/Personal Protection.

*WARNING:* In order to prevent buildup of combustible vapors, do not store large quantities of this product in unventilated spaces. Transport bulk shipments of this product in ventilated vehicles.

*Storage:* Flammable vapors may accumulate in some storage situations. Storage, use and handling areas should be “No Smoking” areas. See Section 10, Exposure Controls/Personal Protection.

Minimize sources of ignition, such as static buildup, heat, spark or flame.

When storing or fabricating large quantities of extruded polystyrene foam, the blowing agents (i.e. 1,1,1,2-Tetrafluoroethane.) released from the foam, if any, may thermally decompose to hydrogen chloride, which tends to accelerate corrosion or rust development of heaters, boilers, gas fired recirculating air furnaces or heaters, or gas water heaters.

This polystyrene foam plastic product is combustible and should be protected from flame and other high heat sources. It should be installed with code-acceptable thermal barriers or used in approved alternative constructions.

#### 9. **Accidental Release Measures:** (See Section 15 for Regulatory Information):

*Protect People:* Clear non-emergency personnel from area. Use appropriate safety equipment. For additional information, refer to Section 10, Exposure Controls/Personal Protection.

*Protect the Environment:* Firewater run off may be toxic.

*Cleanup:* Pick up, or if dust or in small pieces, sweep up and place in suitable container for disposal. See Section 13, Disposal Considerations.

#### 10. **Exposure Controls/Personal Protection:**

*Engineering Controls:* Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

*Respiratory Protection:* Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, including but not limited to saw, router, or hot wire cutting, use an approved air-purifying respirator. In dusty atmospheres, use an approved dust respirator.

# HYDROGUARD

## BALLASTED ROOF INSULATION

### SAFETY DATA SHEET

*Skin Protection:* No precaution other than clean body-covering clothing should be needed.

*Eye Protection:* Use Safety Glasses. If there is a potential for exposure to particles, which could cause mechanical injury to the eye, wear chemical goggles.

*Exposure Guideline(s):* 1,1,1,2-Tetrafluoroethane: AIHA WEEL is 1000 ppm, TWA.

11. **Toxicological Information:** (See Section 6 for Health Hazard Data. For detailed toxicological data, write or call The Dow Chemical Company)

*Mutagenicity (Effects on Genetic Material):* For the minor component(s) 1,1,1,2-Tetrafluoroethane., in vitro mutagenicity studies were negative in some cases and positive in other cases. Animal mutagenicity studies were negative.

12. **Ecological Information:**

*Ecotoxicological information on this product or its components appear in this section when such data is available.*

#### **Toxicity**

##### **Acute toxicity to fish**

Not expected to be acutely toxic to aquatic organisms.

#### **Persistence and degradability**

**Biodegradability:** Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

#### **Bioaccumulative potential**

**Bioaccumulation:** No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000).

#### **Mobility in soil**

In the terrestrial environment, material is expected to remain in the soil.

In the aquatic environment, material is expected to float.

13. **Disposal Considerations:** (See Section 15 for Regulatory Information)

*Disposal:* All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

*For unused & uncontaminated product,* the preferred options include sending to a licensed, permitted: recycler, re-claimer, incinerator or other thermal destruction device, landfill.

For additional information, refer to Section 8, Handling & Storage Information.

# HYDROGUARD

## BALLASTED ROOF INSULATION

### SAFETY DATA SHEET

The Dow Chemical Company can provide names of information resources to help identify waste management companies and other facilities, which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Call Dow Customer Information at 800-258-2436 or 989-832-1556 for further details.

**14. Transportation Information:**

*Department of Transportation (DOT):* This product is not regulated by the DOT when shipped domestically by land.

*Canadian TDG Information:* This product is not regulated by the TDG when shipped domestically by land.

**15. Regulatory Information:** (Not meant to be all-inclusive - selected regulations represented)

**NOTICE:** The information contained herein is based on data considered to be accurate. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with Federal, State/Provincial, and local laws. While the information is believed to be reliable, NO Warranty, expressed or implied, is given in regards to the accuracy of this data or the results to be obtained from the use thereof. Since the use of this information and the conditions and use of this product are controlled by the user, it is the user's obligation to determine the conditions of safe use of the product. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

**OSHA Hazard Communication Standard**

-This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**Superfund Amendments and Reauthorization Act of 1986 Title III  
(Emergency Planning and Community Right-to-Know Act of 1986) Sections  
311 and 312**

-This product is not a hazardous chemical under 29CFR 1910.1200, and therefore is not covered by Title III of SARA.

**Superfund Amendments and Reauthorization Act of 1986 Title III  
(Emergency Planning and Community Right-to-Know Act of 1986) Section  
313**

-This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

# HYDROGUARD

## BALLASTED ROOF INSULATION

### SAFETY DATA SHEET

**Pennsylvania Worker and Community Right-To-Know Act:**

-To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

**California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)**

-This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

**United States TSCA Inventory (TSCA)**

-The product meets the definition of an article and is exempt from inventory requirements.

*Canadian Regulations*

*WHMIS Information:* The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is:

This Product is not a "Controlled Product" under WHMIS.

*Canadian Environmental Protection Act (CEPA):* All substances in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

**16. Other Information:**

*National Fire Protection Association (NFPA) Ratings:*

Health.....1  
Flammability.....1  
Reactivity.....0

**(B) MODIFIED LATEX CONCRETE TOPPING**

**1. Identity**

*Product Name:* Concrete topping for HYDROGUARD Ballasted Roof Insulation

The concrete topping on the HYDROGUARD Ballasted Roof Insulation is a latex modified heavy weight concrete, which is formed and extruded on the surface of the STYROFOAM® RM brand extruded polystyrene foam thermal insulation. After the concrete is allowed to cure, there are no serious hazards when utilized except those as noted below.



# HYDROGUARD

## BALLASTED ROOF INSULATION

### SAFETY DATA SHEET

#### 2. Hazardous Ingredients

Cement.....	10 - 25% by weight
Heavyweight Aggregate .....	60 - 80% by weight
Latex (Styrene/butadiene polymer).....	<10% by weight
Water .....	<10% by weight

#### 3. Physical & Chemical Characteristics

Boiling Point .....	Not Applicable
Specific Gravity .....	Not Applicable
Vapor Pressure.....	Not Applicable
% Volatile .....	Not Applicable
Vapor Density .....	Not Applicable
Evaporation Rate .....	Not Applicable
Appearance & Odor.....	A hard gray covering with a slight cement odor
Flash Point .....	Not Applicable
Flammable Limits in Air .....	Not Applicable
Extinguisher Type .....	Water
Unusual Fire & Explosion Hazards.....	None

#### 4. Physical Hazards

Stability.....	Stable
Incompatibility.....	Strong Acids
Materials to Avoid.....	Strong Acids
Hazardous Decomposition Products.....	Gases from Strong Acid Degradation

#### 5. Toxicological Properties

Medical Conditions	
Generally Aggravated	
by Exposure .....	Possible abrasion by handling without proper protection.
Route of Entry.....	Inhalation or Eye Contact
Acute Exposure.....	Possible irritation of nose, throat and lungs from excessive exposure to dust.
Chronic Exposure.....	Chronic overexposure to dust containing Silica (Quartz Cristobalite and Tridymite) can cause delayed lung injury (Silicosis). Inhalation of Crystalline Silica may contribute to pre-existing pulmonary diseases such as Asthma and lung disorders associated with the smoking of tobacco. Some recent animal studies have caused the international agency to conclude: (1) there is sufficient evidence for carcinogenicity to experimental animals; (2) there is limited evidence for the carcinogenicity to humans.



# HYDROGUARD

## BALLASTED ROOF INSULATION

### SAFETY DATA SHEET

#### *Toxicity Data:*

Quartz: LCLO - 300 ug/m<sup>3</sup>/IDY-1 Inhalation Human

Crystobalite: TCLO - 16 mppcf/8H/17.9Y-1 Inhalation Human

Tridymite: TCLO - 16 mppcf/8H/17.9Y-1 Inhalation Human

*Note:* LD 50 and LC 50 are not available.

In contradiction to IARC's listing as a Class 2A carcinogen, there is considerable disagreement by an informed scientific body. (i.e. "Literature Survey of the Evidence Concerning the Carcinogenicity of Crystalline Silica," by Dr. Karen Hagelstein of Stefan, Robertson and Kristen, Consulting Engineers, 1412 140<sup>th</sup> Place, NE, Bellevue, Washington 98007.

#### **6. Special Protection Information**

##### Respiratory

Protection..... Dust may cause irritation to respiratory tract, use NIOSH approved dust masks.

Ventilation..... General or local to control airborne levels.

Protective Gloves..... In damp conditions, abrasion and skin irritation due to the Alkali in the cement.

Eye Protection ..... Use safety glasses with shields while cutting.

##### Other Protective

Clothing or Equipment ..... Possible use for aprons.

First Aid Measures ..... Wash thoroughly with soap and water. If irritation remains, seek medical attention.

#### **7. Documentary Information**

The information presented here is based on the testing data available to us at the time of publication and is believed to be correct. Since this information may have been obtained in part from independent laboratories or other sources not under our direct supervision, no representation is made that the information is accurate, reliable, complete or representative. We have made no effort to conceal nor to censor deleterious aspects of this product. Since we cannot anticipate all conditions, which may arise during use of this product, we make no guarantee that the health and safety precautions for all individuals and/or situations involving it's handling and use. Likewise, we make no guaranty or warranty of any kind that the use or disposal of this product is in compliance with all federal, state, or local laws. It is the obligation of the user of the product herein to determine and comply with the requirements on all applicable statutes.

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<b>SAFETY DATA SHEET</b>		Revision Date: 05/25/2015
AMERICAN HYDROTECH, INC.		Print Date: 8/26/2015
LAP SEALANT		SDS Number: R0286973
		Version: 1.1

29 CFR 1910.1200 (OSHA HazCom 2012)

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

### Product identifier

Trade name LAP SEALANT

### Recommended use of the chemical and restrictions on use

Use of the Substance/Mixture : Adhesives

<b>Details of the supplier of the safety data sheet</b> American Hydrotech, Inc. 303 East Ohio Street, Suite 2700 Chicago, IL 60611 www.hydrotechusa.com	<b>Emergency telephone number</b> (312) 337-4998
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## SECTION 2. HAZARDS IDENTIFICATION

### GHS Classification

Flammable liquids : Category 2

Skin sensitization : Category 1

Carcinogenicity (Inhalation) : Category 2

Specific target organ systemic toxicity - single exposure : Category 3 (Central nervous system)

### GHS Label element

Hazard pictograms :



Signal Word : Danger

Hazard Statements : Highly flammable liquid and vapor.  
May cause an allergic skin reaction.  
May cause drowsiness or dizziness.  
Suspected of causing cancer if inhaled.

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		Version: 1.1

Precautionary Statements : **Prevention:**  
 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.  
 Use only non-sparking tools.  
 Take precautionary measures against static discharge.  
 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
 Use only outdoors or in a well-ventilated area.  
 Contaminated work clothing must not be allowed out of the workplace.  
 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**Response:**  
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.  
 IF exposed or concerned: Get medical advice/ attention.  
 If skin irritation or rash occurs: Get medical advice/ attention.  
 Wash contaminated clothing before reuse.  
 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.  
**Storage:**  
 Store in a well-ventilated place. Keep container tightly closed.  
 Store in a well-ventilated place. Keep cool.  
 Store locked up.  
**Disposal:**  
 Dispose of contents/ container to an approved waste disposal plant.

#### Other hazards

Static Accumulating liquid

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

#### Hazardous components

Chemical Name	CAS-No.	Classification	Concentration (%)
MINERAL OIL	800986-5072P	Not a hazardous substance or mixture.	>= 5.00 - < 10.00

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PHENOL DERIVATIVE	800986-5033P	Skin Sens. 1; H317	>= 0.10 - < 0.50
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The identity of one or more component(s) is being withheld under business confidentiality.

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	64742-89-8	Flam. Liq. 2; H225  STOT SE 3; H336  Asp. Tox. 1; H304	29.40
PETROLEUM DISTILLATES (STODDARD TYPE)	8052-41-3	Flam. Liq. 3; H226  Asp. Tox. 1; H304	12.60
KAOLIN	1332-58-7	This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).	9.99
CARBON BLACK	1333-86-4	Carc. 2; H351	0.93

#### SECTION 4. FIRST AID MEASURES

General advice	: Move out of dangerous area. Call a POISON CENTRE or doctor/physician if exposed or you feel unwell. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled	: Move to fresh air. If unconscious place in recovery position and seek medical advice. Consult a physician after significant exposure.
In case of skin contact	: Remove contaminated clothing. If irritation develops, get medical attention.

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If on skin, rinse well with water.  
First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.  
Wash contaminated clothing before re-use.  
If on clothes, remove clothes.

- In case of eye contact : Flush eyes with water as a precaution.  
Remove contact lenses.  
Protect unharmed eye.  
If eye irritation persists, consult a specialist.
- If swallowed : Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material.

Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:

stomach or intestinal upset (nausea, vomiting, diarrhea)  
irritation (nose, throat, airways)  
May cause an allergic skin reaction.  
May cause drowsiness or dizziness.  
Suspected of causing cancer if inhaled.

- Notes to physician : No hazards which require special first aid measures.

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## SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Water spray  
Foam

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Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical

Unsuitable extinguishing media	: High volume water jet
Specific hazards during firefighting	: Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	: Aldehydes carbon dioxide and carbon monoxide organic compounds various hydrocarbons Hydrocarbons aluminum oxides silicon oxides Hydrogen chloride gas
Specific extinguishing methods	:  Product is compatible with standard fire-fighting agents.
Further information	: Do not use a solid water stream as it may scatter and spread fire. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Use a water spray to cool fully closed containers.
Special protective equipment for firefighters	: In the event of fire, wear self-contained breathing apparatus.

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Evacuate personnel to safe areas. Remove all sources of ignition. Use personal protective equipment. Ensure adequate ventilation. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
Environmental precautions	: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

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- Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
- Other information : Comply with all applicable federal, state, and local regulations. Suppress (knock down) gases/vapours/mists with a water spray jet.

## SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Open drum carefully as content may be under pressure.  
Avoid formation of aerosol.  
Provide sufficient air exchange and/or exhaust in work rooms.  
Do not breathe vapours/dust.  
Do not smoke.  
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.  
Container hazardous when empty.  
Take precautionary measures against static discharges.  
Avoid exposure - obtain special instructions before use.  
Avoid contact with skin and eyes.  
Smoking, eating and drinking should be prohibited in the application area.  
For personal protection see section 8.  
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Observe label precautions.  
No smoking.  
Electrical installations / working materials must comply with the technological safety standards.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
MINERAL OIL	800986-	REL	5 mg/m3	NIOSH/GUID

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	5072P		Mist.	E
		STEL	10 mg/m3 Mist.	NIOSH/GUID E
		PEL	5 mg/m3 Mist.	OSHA_TRA NS
		TWA	5 mg/m3 Mist.	TN OEL
		TWA	5 mg/m3 Inhalable fraction.	ACGIH
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	64742-89-8	TWA	500 ppm	OSHA_TRA NS
		TWA	300 ppm	ACGIH
		TWA	2,000 mg/m3	OSHA_TRA NS
		TWA	1,370 mg/m3	ACGIH
PETROLEUM DISTILLATES (STODDARD TYPE)	8052-41-3	TWA	100 ppm	ACGIH
		TWA	100 ppm	ACGIH
		REL	350 mg/m3	NIOSH/GUID E
		REL	350 mg/m3	NIOSH/GUID E
		Ceil_Time	1,800 mg/m3	NIOSH/GUID E
		Ceil_Time	1,800 mg/m3	NIOSH/GUID E
		PEL	500 ppm 2,900 mg/m3	OSHA_TRA NS
		PEL	500 ppm 2,900 mg/m3	OSHA_TRA NS
KAOLIN	1332-58-7	TWA	2 mg/m3 Respirable fraction.	ACGIH
		REL	5 mg/m3 Respirable.	NIOSH/GUID E
		REL	10 mg/m3 Total	NIOSH/GUID E
		PEL	5 mg/m3 Respirable fraction.	OSHA_TRA NS
		PEL	15 mg/m3 Total dust.	OSHA_TRA NS
		TWA	10 mg/m3 Total dust.	TN OEL
		TWA	5 mg/m3 Respirable fraction.	TN OEL
CARBON BLACK	1333-86-4	REL	0.1 mg/m3	NIOSH/GUID E
		REL	3.5 mg/m3	NIOSH/GUID E



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		PEL	3.5 mg/m3	OSHA_TRANS
		TWA	3 mg/m3 Inhalable fraction.	ACGIH
TITANIUM DIOXIDE (TiO2)	13463-67-7	TWA	10 mg/m3	ACGIH
		PEL	15 mg/m3 Total dust.	OSHA_TRANS
		TWA	1 mg/m3 Respirable fraction.	ACGIHLIS_P

**Engineering measures** : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

**Personal protective equipment**

**Respiratory protection** : In the case of vapour formation use a respirator with an approved filter.

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

**Hand protection**  
**Remarks** : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

**Eye protection** : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

**Skin and body protection** : Wear as appropriate:  
impervious clothing  
Safety shoes  
Flame-resistant clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.  
Discard gloves that show tears, pinholes, or signs of wear.  
Wear resistant gloves (consult your safety equipment supplier).

**Hygiene measures** : Wash hands before breaks and at the end of workday.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

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Appearance : paste  
 Physical state : liquid  
 Colour : black  
 Odour : No data available  
 Odour Threshold : No data available  
 pH : No data available  
 : No data available  
 Boiling point/boiling range : 185 °F / 85 °C  
 (1,013.333333 hPa)  
 Calculated Phase Transition Liquid/Gas  
 Flash point : 50 °F / 10 °C  
 (Estimated)  
 Evaporation rate : < 1  
 Ethyl Ether  
 Flammability (solid, gas) :  
 No data available  
 Flammability (liquids) : Static Accumulating liquid  
 Flammability (liquids) :  
 Upper explosion limit : 8 %(V)  
 Calculated Explosive Limit  
 Lower explosion limit : 1 %(V)  
 Calculated Explosive Limit  
 Vapour pressure : No data available  
 Relative vapour density : > 1AIR=1  
 Relative density : 0.988 (25 °C)  
 Density : 0.988 g/cm3 (20 °C)  
 Solubility(ies)  
 Water solubility : practically insoluble  
 Solubility in other solvents : No data available  
 Partition coefficient: n-  
 octanol/water : No data available  
 Thermal decomposition : No data available  
 Viscosity

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Viscosity, dynamic : ca. 600,000 mPa.s (20 °C)

Viscosity, kinematic : > 7 mm<sup>2</sup>/s (40 °C)

Oxidizing properties : No data available

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## SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Vapours may form explosive mixture with air.

Conditions to avoid : Heat, flames and sparks.

excessive heat  
Exposure to sunlight.

Incompatible materials : Bases  
Iron  
Oxidizing agents  
steel  
Strong acids

Hazardous decomposition products  
Aldehydes  
carbon dioxide and carbon monoxide  
Hydrocarbons  
Hydrogen chloride gas  
organic compounds  
various hydrocarbons

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## SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation  
Skin contact  
Eye Contact  
Ingestion

### Acute toxicity

Not classified based on available information.

### Components:

#### MINERAL OIL:

Acute oral toxicity : LD 50 (Rat): 50,000 mg/kg

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Acute dermal toxicity : LD 50 (Rabbit): > 2,000 mg/kg  
Assessment: Not classified as acutely toxic by dermal absorption under GHS.

**PHENOL DERIVATIVE:**

Acute oral toxicity : LD 50 (Rat): > 2,000 mg/kg

**Components:**

**SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC:**

Acute oral toxicity : LD 50 (Rat): > 8,000 mg/kg

Acute inhalation toxicity : LC 50 (Rat): > 7,630 mg/m3  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: OECD Test Guideline 403  
Assessment: No adverse effect has been observed in acute inhalation toxicity tests.

Acute dermal toxicity : LD 50 (Rat): > 4,000 mg/kg  
Assessment: Not classified as acutely toxic by dermal absorption under GHS.

**PETROLEUM DISTILLATES (STODDARD TYPE):**

Acute oral toxicity : LD 50 (Rat): > 5 g/kg

Acute dermal toxicity : LD 50 (Rabbit): > 3 g/kg

**KAOLIN:**

Acute oral toxicity : LD 50 (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD 50 (Rat): > 5,000 mg/kg

**CARBON BLACK:**

Acute oral toxicity : LD 50 (Rat): > 10,000 mg/kg

Acute dermal toxicity : LD 50 (Rabbit): > 3 g/kg

**Skin corrosion/irritation**

Not classified based on available information.

**Product:**

Result: Repeated exposure may cause skin dryness or cracking.

Remarks: May cause skin irritation in susceptible persons.

**Components:**

**MINERAL OIL:**

Result: Not irritating to skin

**PHENOL DERIVATIVE:**

Result: Possibly irritating to skin

**Components:**

**SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC:**

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Result: Mildly irritating to skin

Result: Repeated exposure may cause skin dryness or cracking.

PETROLEUM DISTILLATES (STODDARD TYPE):

Result: Mildly irritating to skin

KAOLIN:

Result: Not irritating to skin

CARBON BLACK:

Result: Not irritating to skin

**Serious eye damage/eye irritation**

Not classified based on available information.

**Product:**

Remarks: Unlikely to cause eye irritation or injury.

**Components:**

MINERAL OIL:

Result: Not irritating to eyes

PHENOL DERIVATIVE:

Result: Not irritating to eyes

**Components:**

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC:

Result: Mildly irritating to eyes

PETROLEUM DISTILLATES (STODDARD TYPE):

Result: Mildly irritating to eyes

KAOLIN:

Result: Not irritating to eyes

CARBON BLACK:

Result: Slightly irritating to eyes

**Respiratory or skin sensitisation**

Skin sensitisation: May cause an allergic skin reaction.

Respiratory sensitisation: Not classified based on available information.

**Components:**

PHENOL DERIVATIVE:

Assessment: May cause sensitization by skin contact.

Result: May cause sensitization by skin contact.

**Germ cell mutagenicity**

Not classified based on available information.

**Carcinogenicity**

Suspected of causing cancer if inhaled.

**Components:**

CARBON BLACK:

Carcinogenicity -

Assessment

: Limited evidence of carcinogenicity in inhalation studies with animals.

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#### Reproductive toxicity

Not classified based on available information.

#### STOT - single exposure

May cause drowsiness or dizziness.

#### Components:

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC:

Exposure routes: Inhalation

Target Organs: Central nervous system

Assessment: May cause drowsiness or dizziness.

#### STOT - repeated exposure

Not classified based on available information.

#### Aspiration toxicity

Not classified based on available information.

#### Product:

No aspiration toxicity classification

#### Components:

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC:

May be fatal if swallowed and enters airways.

PETROLEUM DISTILLATES (STODDARD TYPE):

May be fatal if swallowed and enters airways.

#### Further information

#### Product:

Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting., Concentrations substantially above the TLV value may cause narcotic effects., Solvents may degrease the skin.

#### Carcinogenicity:

##### IARC

Group 2B: Possibly carcinogenic to humans

CARBON BLACK 1333-86-4

TITANIUM DIOXIDE (TiO<sub>2</sub>) 13463-67-7

##### OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

##### NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

## SECTION 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

No data available

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**Persistence and degradability**

No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Other adverse effects**

No data available

**Product:**

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful to aquatic life with long lasting effects.

### SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

General advice : The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.  
  
Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.  
Do not re-use empty containers.  
Do not burn, or use a cutting torch on, the empty drum.

### SECTION 14. TRANSPORT INFORMATION

**International transport regulations**

**REGULATION**

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.
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**MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES**

UN	1133	Adhesives	3	II	LIMITED QUANTITY
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**INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER**



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UN	1133	Adhesives	3	II	LIMITED QUANTITY

#### INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN	1133	Adhesives	3	II	LIMITED QUANTITY

#### INTERNATIONAL MARITIME DANGEROUS GOODS

UN	1133	ADHESIVES	3	II	LIMITED QUANTITY

#### TRANSPORT CANADA - INLAND WATERWAYS

UN	1133	ADHESIVES	3	II	LIMITED QUANTITY

#### TRANSPORT CANADA - RAIL

UN	1133	ADHESIVES	3	II	LIMITED QUANTITY

#### TRANSPORT CANADA - ROAD

UN	1133	ADHESIVES	3	II	MARINE POLLUTANT:( SOLVENT NAPHTHA (PETROLEUM ) , LIGHT ALIPHATIC)LI MITED QUANTITY

#### U.S. DOT - INLAND WATERWAYS

UN	1133	Adhesives	3	II	

#### U.S. DOT - RAIL

UN	1133	Adhesives	3	II	

#### U.S. DOT - ROAD

UN	1133	ADHESIVOS	3	II	

\*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Marine pollutant	yes
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Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

## SECTION 15. REGULATORY INFORMATION

### EPCRA - Emergency Planning and Community Right-to-Know Act

#### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
XYLENE	1330-20-7	100	26476.039185

**SARA 311/312 Hazards** : Fire Hazard  
Acute Health Hazard  
Chronic Health Hazard

**SARA 313** : This material does not contain any chemical components with  
**Component(s)** known CAS numbers that exceed the threshold (De Minimis)  
**SARA 313** reporting levels established by SARA Title III, Section 313.

**California Prop 65** WARNING! This product contains a chemical known to the  
State of California to cause cancer.  
CARBON BLACK 1333-86-4  
QUARTZ / SAND 14808-60-7  
ETHYL BENZENE 100-41-4  
NAPHTHALENE 91-20-3  
BENZENE 71-43-2  
WARNING: This product contains a chemical known to the  
State of California to cause birth defects or other reproductive  
harm.  
TOLUENE 108-88-3  
BENZENE 71-43-2

#### The components of this product are reported in the following inventories:

TSCA : On TSCA Inventory

DSL : All components of this product are on the Canadian DSL.

AUSTR : On the inventory, or in compliance with the inventory

ENCS : Not in compliance with the inventory

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KECL : On the inventory, or in compliance with the inventory

PICCS : Not in compliance with the inventory

IECSC : Not in compliance with the inventory

#### Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

#### Registration: Trade Secret

Chemical Name	Identification number
MINERAL OIL	Not Assigned
PHENOL DERIVATIVE	800986-5033P

## SECTION 16. OTHER INFORMATION

#### Further information

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NFPA:	HMIS III:						
<p>Flammability</p> <p>Health</p> <p>Instability</p> <p>Special hazard.</p>	<table> <tr> <td>HEALTH</td><td>1*</td></tr> <tr> <td>FLAMMABILITY</td><td>3</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> <p>0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p>	HEALTH	1*	FLAMMABILITY	3	PHYSICAL HAZARD	0
HEALTH	1*						
FLAMMABILITY	3						
PHYSICAL HAZARD	0						

#### NFPA Flammable and Combustible Liquids Classification

Flammable Liquid Class IB

#### Full text of H-Statements referred to under sections 2 and 3.

H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer if inhaled.

Sources of key data used to compile the Safety Data Sheet  
Ashland internal data including own and sponsored test reports

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The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

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<b>SAFETY DATA SHEET</b>		Revision Date: 05/25/2015
AMERICAN HYDROTECH, INC.		Print Date: 8/26/2015
LAP SEALANT		SDS Number: R0286973
		Version: 1.1

WHMIS : Workplace Hazardous Materials Information System

# Safety Data Sheet

Preparation Date: November 17, 2020

Version: 1

## SECTION 1. IDENTIFICATION

### Product Identifier

Product Name	LM 6090 H & LM 6090 V
Generic Name	BASE COMPOUND OF 2-PART LIQUID RUBBER MEMBRANE
Restrictions on Use	NO INFORMATION AVAILABLE
Recommended Use	RUBBER MEMBRANES, TO BE USED IN INDUSTRIAL APPLICATIONS IN CONSTRUCTION
Initial Supplier Identifier	AMERICAN HYDROTECH, INC. 541 N. FAIRBANKS CT., SUITE 2700 CHICAGO, IL 60611 UNITED STATES
Emergency Telephone Number	PERS: 1-800-663-8253 (Domestic / Canada) Poison Control Center (QC 24 hours) : 1-800-463-5060

## SECTION 2. HAZARD IDENTIFICATION

### Classification

THIS MATERIAL DOES NOT MEET CLASSIFICATION CRITERIA AND IS CONSIDERED NON-HAZARDOUS

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

DIFUNCTIONAL POLYBUTADIENE HOMOPOLYMER – 10 TO 40% BY WEIGHT, BLENDED IN PROPRIETARY MIX OF FILLERS AND ADDITIVES INCLUDING CALCIUM CARBONATE, SILICA CRYSTALLINE, FUMED SILICA, CARBON BLACK, PERFORMANCE GRADED ASPHALT BITUMEN AND NAPHTHENIC PROCESSING OIL

## **SECTION 4. FIRST-AID MEASURES**

### **General Advice**

NOT EXPECTED TO PRESENT A SIGNIFICANT HAZARD UNDER ANTICIPATED CONDITIONS OF NORMAL USE. TREAT SYMPTOMATICALLY

### **Inhalation**

IF INHALED REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION AND OBTAIN IMMEDIATE MEDICAL ATTENTION AS SOON AS POSSIBLE

### **Skin Contact**

RINSE WITH PLENTY OF SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION

### **Eye Contact**

RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. OBTAIN MEDICAL ATTENTION IF PAIN, BLINKING, TEARS OR REDNESS PERSISTS

## **SECTION 5. FIRE-FIGHTING MEASURES**

### **Extinguishing Media**

CARBON DIOXIDE, DRY CHEMICAL FOAM, DRY POWDER. SAND. WATER SPRAY. WATER FOG

### **Hazardous Combustion Products**

CARBON MONOXIDE. CARBON DIOXIDE. 1,3 BUTADIENE, HYDROCARBONS, TOXIC FUMES

### **Special Protective Equipment for Fire Fighters**

SLIGHTLY COMBUSTIBLE. HEAT FROM FIRE CAN GENERATE FLAMMABLE VAPOUR. WHEN MIXED WITH AIR AND EXPOSED TO IGNITION SOURCE, CAN BURN IN OPEN AIR BE AN EXBOR EXPLODE IF CONFINED. NOT EXPECTED TO BE AN EXPLOSION HAZARD UNDER NORMAL CONDITIONS OF USE. FIGHT FIRE FROM SAFE DISTANCE AND PROTECTED LOCATION. AVOID DIRECT PERSONAL CONTACT WITH LIQUID EVEN AFTER FIRE IS OUT TO PREVENT POTENTIALLY SERIOUS BURNS. USE WATER SPRAY OR FOG FOR COOLING EXPOSED CONTAINERS. APPLY AQUEOUS EXTINGUISHING MEDIA CAREFULLY TO PREVENT FROTHING/STEAM EXPLOSION. HEAT MAY BUILD PRESSURE, RUPTURING CLOSED CONTAINERS, SPREADING FIRE AND INCREASING RISK OF BURNS AND INJURIES. PREVENT FIRE-FIGHTING WATER FROM ENTERING ENVIRONMENT. DO NOT ATTEMPT TO TAKE ACTION WITHOUT SUITABLE PROTECTIVE EQUIPMENT. COMPLETE PROTECTIVE CLOTHING. SELF-CONTAINED BREATHING APPARATUS. FIRES ARE TYPICALLY VERY SMOKY

## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

### **Personal Precautions and Protective Equipment**

ENSURE ADEQUATE VENTILATION. DO NOT ATTEMPT TO TAKE ACTION WITH SUITABLE PROTECTIVE EQUIPMENT. FOR FURTHER INFORMATION, REFER TO SECTION 8 "EXPOSURE CONTROLS/PERSONAL PROTECTION"

### **Emergency Procedures**

NO ADDITIONAL REQUIREMENTS

### **Method and Materials used for Containment**

TAKE UP LIQUID SPILL INTO ABSORBENT MATERIAL (IE. SAND, EARTH, VERMICULITE). KEEP RECOVERED FOR SUBSEQUENT DISPOSAL

### **Clean Up**

WASH AWAY RESIDUE WITH LARGE AMOUNTS OF WATER. GATHER PRODUCT AND PLACE IT IN A SPARE CONTAINER THAT HAS BEEN SUITABLY LABELLED

## SECTION 7. HANDLING AND STORAGE

### Precautions for Safe Handling

ENSURE GOOD VENTILATION OF THE WORK AREA. WEAR PERSONAL PROTECTIVE EQUIPMENT. AVOID CONTACT WITH ELEVATED TEMPERATURE OR MOLTEN PRODUCT TO PREVENT BURNS. USE ONLY NON-SPARKLING TOOLS. STEAM DRUM HEATERS ARE RECOMMENDED. IF HEATING IS NECESSARY FOR DRUMMED PRODUCT, LOOSEN OR REMOVE BUNG OR LID BEFORE WARMING/HEATING PRODUCT TO AVOID OVERPRESSURIZATION IN THE DRUM. DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT. ALWAYS WASH HANDS AFTER HANDLING THE PRODUCT

### Storage Requirements

STORE CONTAINERS IN A COOL, DRY LOCATION. KEEP CONTAINERS CLOSED WHEN NOT IN USE. STORE FOR A MAXIMUM OF 5 YEARS (MIN/MAX: 10/32 °C)

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Limits

	ACGIH TLV	OSHA PEL	NIOSH
	TWA       STEL	PEL       STEL	REL
ALL INGREDIENTS IN THE MIX	NOT ESTABLISHED	NOT ESTABLISHED	NOT ESTABLISHED

### Engineering Controls

NOT REQUIRED FOR INTENDED USE. ALWAYS ENSURE THAT THERE IS ADEQUATE VENTILATION

### Clothing/Type

WEAR ADEQUATE PROTECTIVE CLOTHING TO PREVENT SKIN CONTACT

### Eye/Type

PREVENT EYE CONTACT, WEAR SAFETY (SPASH RESISTANT) GLASSES IN THE EVENT THAT EYE CONTACT IS POSSIBLE

### Footwear/Type

WEAR SAFETY BOOTS AS PER LOCAL REGULATIONS

### Gloves/Type

WEAR IMPERVIOUS GLOVES

### Respiratory/Type

NOT NORMALLY REQUIRED IF GOOD VENTILATION IS MAINTAINED. NIOSH APPROVED RESPIRATOR IS RECOMMENDED IF VAPOURS OR MISTS ARE GENERATED

### Other/Type

AN EYEWASH STATION AND SAFETY SHOWER SHOULD BE MADE AVAILABLE IN THE IMMEDIATE WORKING AREA



## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	LIQUID, VISCOUS
Odour & Appearance:	BLACK, PETROLEUM ODOUR
Odour Threshold:	N.AV.
pH:	N.AV.
Freezing Point:	N.AV.
Boiling Point:	> 300 °C (> 572 °F)
Flash Point:	> 95 °C (> 203 °F) (PENSKEY-MARTENS CLOSED CUP)
Evaporation Rate:	N. AV.
Upper and Lower Explosive Limit:	N.AV.
Vapour Pressure:	<0.0001 mmHg @ 25 °C (77 °F)
Vapour Density (air = 1):	N.AV.
Density:	N.AV.
Relative Vapour Density:	N.AV.
Specific Gravity:	1.32
Solubility in Water:	PRACTICALLY INSOLUBLE IN WATER
Partition Coefficient, n-Octanol / Water (Log Kow)	N.AV.
Auto-ignition Temperature:	N.AV.
Decomposition Temperature:	N.AV.
Viscosity:	> 10,000 CPS @ 21 °C (70 °F)

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

NO DANGEROUS REACTIONS KNOWN UNDER NORMAL CONDITIONS OF USE

### Chemical Stability

STABLE UNDER CONDITIONS OF STANDARD TEMPERATURE AND PRESSURE

### Possibility of Hazardous Reactions

DECOMPOSES BY POLYMERIZATION ABOVE 204 °C (399 °F). ONCE INITIATED THE REACTION GENERATES ENOUGH HEAT TO CONTINUE SPONTANEOUSLY. CRACKS INTO GASEOUS AND LIQUID PRODUCTS ABOVE 426 °C (799 °F)

### Conditions to Avoid

HEAT, DIRECT SUNLIGHT AND HIGH TEMPERATURES

### Incompatibility

STRONG OXIDIZING AGENTS. STRONG REDUCING AGENTS. STRONG ACIDS. FREE RADICAL INITIATORS/PEROXIDES

### Hazardous Products of Decomposition

UNDER NORMAL CONDITIONS OF STORAGE AND USE, HAZARDOUS DECOMPOSITION PRODUCTS SHOULD NOT BE PRODUCED

## **SECTION 11. TOXICOLOGICAL INFORMATION**

### **Routes of Entry**

SKIN CONTACT, INHALATION, EYE CONTACT, INGESTION

### **Effects of Acute Exposure**

SKIN CONTACT – LITTLE TO NO IRRITATION

EYE CONTACT – MILD IRRITATION

INHALATION AND INGESTION – SYMPTOMS OF OVER-EXPOSURE DUE TO INHALATION OR INGESTION  
UNLIKELY TO OCCUR

### **Effects of Chronic Exposure**

NO KNOWN HEALTH EFFECTS DUE TO CHRONIC EXPOSURE

### **Exposure Limits**

NOT APPLICABLE

### **Sensitization**

DOES NOT OCCUR WITH UNACTIVATED PRODUCT

### **Toxicologically Synergistic Products**

NONE KNOWN

### **Other Health Effects**

NONE KNOWN

## **SECTION 12. ECOLOGICAL INFORMATION**

### **Ecotoxicity**

THIS PRODUCT IS NOT CONSIDERED HARMFUL TO AQUATIC ORGANISMS NOR TO CAUSE LONG-TERM  
ADVERSE EFFECTS IN THE ENVIRONMENT

### **Environmental**

BIODEGRADABILITY INFORMATION IS NOT AVAILABLE

### **Bioaccumulation**

NO ADDITIONAL INFORMATION AVAILABLE

### **Absorption Potential**

NO ADDITIONAL INFORMATION AVAILABLE

### **Other Adverse Effects**

NO ADDITIONAL INFORMATION AVAILABLE

## **SECTION 13. DISPOSAL CONSIDERATIONS**

### **Appropriate Disposal Methods**

DISPOSAL OF EMPTY CONTAINERS IN ACCORDANCE WITH LOCAL REGULATIONS OR CURRENT RECYCLING PROGRAMS

### **Physical and Chemical Properties that may Affect Disposal**

NONE ANTICIPATED

### **Sewage Disposal Comments**

PREVENT THIS PRODUCT FROM ENTERING SEWERS, DRAINS OR ANY OTHER WATER SOURCE

### **Other Special Cautions**

NONE REQUIRED

## **SECTION 14. TRANSPORT INFORMATION**

### **TDG Classification**

NON-REGULATED

### **DOT Classification**

NON-REGULATED

### **IATA Classification**

NON-REGULATED

### **IMDG Classification**

NON-REGULATED

### **Any Special Precautions**

HANDLE WITH CARE ACCORDING TO PROCEDURES ON THIS SAFETY DATA SHEET

### **Proof of Classification**

IN ACCORDANCE WITH PART 2.2.1 OF THE TRANSPORT OF DANGEROUS GOOD REGULATIONS (JULY 2, 2014), WE CERTIFY THAT CLASSIFICATION OF THIS PRODUCT HAS BEEN DETERMINED BASED ON THE SAFETY DATA SHEETS OF THE INGREDIENTS OF THE FORMULATION

## **SECTION 15. REGULATORY INFORMATION**

### **CEPA Status**

ALL COMPONENTS OF THIS PRODUCT ARE LISTED ON THE DOMESTIC SUBSTANCE LIST (DSL)

### **TSCA Inventory Status**

ALL COMPONENTS ARE LISTED ON TSCA

### **EINECS**

ALL INGREDIENTS APPEAR ON THE EINECS INVENTORY OR ARE EXEMPT

### **Section 302- Extremely Hazardous Substances**

NONE

### **Section 311/312 – Hazard Categories**

NOT APPLICABLE

**SARA Section 313**

THIS PRODUCT CONTAINS NO CHEMICALS IN EXCESS OF THE APPLICABLE DE MINIMIS CONCENTRATION THAT ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372 (TABLE 372.65)

**EPA Hazardous Air Pollutants (HAPS) 40CFR63**

NONE

**California Proposition 65**

THIS PRODUCT DOES NOT CONTAIN ANY CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER OR REPRODUCTIVITY TOXICITY

**SECTION 16. OTHER INFORMATION****Preparation Date**

NOVEMBER 17/20, VERSION 1.0

**Disclaimer**

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*WHMIS 2015 Template Provided by CCOHS, 2015*

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AMERICAN HYDROTECH, INC.  
303 East Ohio Street  
Chicago, Illinois 60611  
(312) 337-4998 5-99

LIQUID MEMBRANE 6090  
SOLVENTLESS  
HORIZONTAL & VERTICAL

## SECTION I

CHEMICAL NAME & SYNONYMS: Two-component Liquid Rubber  
CHEMICAL FAMILY: N. Av.  
TRADE NAME & SYNONYMS: Liquid Membrane 6090  
FORMULA: N. Av.

## SECTION II – HAZARDOUS INGREDIENTS

<u>INGREDIENT</u>	<u>C.A.S. #</u>	<u>%</u>	<u>TLV EXPOSURE LIMITS</u>
DIPHENYLMETHANE DIISOCYANATE (ACTIVATOR)	26447-40-5	0.8	0.02 ppm

## SECTION III – PHYSICAL DATA

BOILING POINT (°F):	280.4	PERCENT VOLATILE BY VOLUME:	7.5
VAPOR PRESSURE (mmHg @ 20°C):	< 1		
VAPOR DENSITY (AIR=1):	N. App.	EVAPORATION RATE (BUTYL ACETATE=1):	N. App.
SPECIFIC GRAVITY (H <sub>2</sub> O=1):	1.3		

SOLUBILITY IN WATER: Base: None Activator: reacts with water  
APPEARANCE AND ODOR: Base: black liquid, petroleum odor Activator: dark brown liquid, slight musty odor

## SECTION IV – FIRE AND EXPLOSION HAZARDS

FLASH POINT (METHOD USED): N. Av.  
FLAMMABLE LIMITS: N. Av.  
EXTINGUISHING MEDIA: CO<sub>2</sub>, dry chemical foam, water spray  
SPECIAL FIRE FIGHTING PROCEDURES: Fire fighters must wear self-contained breathing apparatus and protective clothing.  
UNUSUAL FIRE/EXPLOSION HAZARDS: Avoid water contamination of activator in closed or confined spaces.

**SECTION V – HEALTH HAZARD DATA**

THRESHOLD LIMIT VALUE(S): LD 50, ORAL > 20,000 mg/kg, DERMAL > 7,940 mg/kg

SIGNS/SYMPTOMS/EFFECTS OF OVEREXPOSURE: Irritating to eyes and respiratory tract. Skin sensitization in some people. Allergic sensitivity possible in some people.

EMERGENCY AND FIRST AID PROCEDURES:

EYES: Flush with water for 15 minutes. Consult physician.

SKIN: Wash with tincture of green soap & water for 15 minutes. Consult physician.

INHALATION: Remove to uncontaminated area.

INGESTIONS: Consult physician.

**SECTION VI – REACTIVITY DATA**

STABILITY: Stable

CONDITIONS TO AVOID: Temperatures > 120°F or < 32°F.

HAZARDOUS POLYMERIZATION: May occur with activator

CONDITIONS TO AVOID: Contact with moisture and other materials that react with isocyanate

INCOMPABILITY (MATERIALS TO AVOID): Water, bases, alcohol, strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide & sulfur on combustion

**SECTION VII – SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Cover with loose absorbent material. Place in open containers and treat with dilute NH<sub>4</sub>OH for 24 hours. Ventilate area.

WASTE DISPOSAL METHODS:

Liquid material is designated as hazardous waste until all solvents have evaporated. Dispose of in accordance with state and federal regulations.

**SECTION VIII – SPECIAL PROTECTION INFORMATION**

VENTILATION (TYPE): Good ventilation necessary

RESPIRATORY PROTECTION: Not required due to low vapor pressure

PROTECTIVE CLOTHING & EQUIPMENT: Goggles and resistant gloves

**SECTION IX – SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep material dry

*Information presented herein has been compiled from sources considered to be dependable and current, and is accurate and reliable to the best of our knowledge, but is not guaranteed to be so. It is the user's responsibility to determine for himself the suitability of this information for his safe use of this product, and to adopt such proper safety precautions as may be necessary to provide adequate worker and plant protection.*

## MATERIAL SAFETY DATA SHEET

AMERICAN HYDROTECH, INC. - 303 EAST OHIO - CHICAGO, IL

EMERGENCY PHONE: (905) 683-6447

DATE PREPARED: 04/15/2019

PREPARED BY: D. STEFAN

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### 1. PRODUCT INFORMATION

**PRODUCT NAME:** LIQUID MEMBRANE 6090 PRIMER  
**GENERIC NAME:** EPOXY URETHANE EMULSION  
**PRODUCT USE:** PRIMER, SEALER  
**CLASSIFICATION:** CLASS D2A

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### 2. HAZARDOUS INGREDIENTS

COMPONENT NAME	% CONC (WT/WT)	LD50ORAL RAT	LD50DERMAL RABBIT	LC50 INHALATION RAT AEROSOL	CAS NUMBER
N. BUTOXY PROPANOL	1 - 2	N.AV.	N.AV.	N.AV.	5131-66-8

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### 3. PHYSICAL DATA

<b>PHYSICAL STATE:</b>	LIQUID.
<b>ODOUR AND APPEARANCE:</b>	GREY, MILD SOLVENT ODOUR.
<b>ODOUR THRESHOLD:</b>	N.AV.
<b>SPECIFIC GRAVITY:</b>	1.02 - 1.03
<b>VAPOUR PRESSURE:</b>	17.4mm Hg
<b>VAPOUR DENSITY (AIR=1)</b>	>1 (HEAVIER THAN AIR)
<b>EVAPORATION RATE:</b>	(NBUTYL ACETATE = 1) 0.35
<b>BOILING POINT (°C):</b>	100 - 275.
<b>FREEZING POINT (°C):</b>	0
<b>pH:</b>	NEUTRAL
<b>COEFFICIENT OF WATER/OIL DISTRIBUTION:</b>	N.AV.

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**4. FIRE OR EXPLOSION HAZARDS**

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<b>FLASHPOINT (METHOD):</b>	NON-FLAMMABLE
<b>UPPER FLAMMABLE LIMIT (% BY VOLUME):</b>	N.AV.
<b>LOWER FLAMMABLE LIMIT:</b>	N.AV.
<b>AUTO IGNITION TEMPERATURE (°C):</b>	N.AV.
<b>HAZARDOUS COMBUSTION PRODUCTS:</b>	CARBON MONOXIDE, OXIDES OF NITROGEN
<b>CONDITIONS OF FLAMMABILITY:</b>	NON-FLAMMABLE
<b>EXPLOSION SENSITIVITY:</b>	NOT SENSITIVE.
<b>MEANS OF EXTINCTION:</b>	CARBONDIOXIDE, DRY CHEMICALS OR FOAM.

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**5. REACTIVITY DATA**

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<b>CHEMICAL STABILITY:</b>	STABLE.
<b>INCOMPATIBILITY:</b>	AVOID CONTACT WITH STRONG ALKALIES, OXIDIZING AGENTS OR MINERAL ACIDS.
<b>HAZARDOUS DECOMPOSITION PRODUCTS:</b>	CARBON MONOXIDE MAY BE PRODUCED UPON COMBUSTION.
<b>CONDITIONS OF REACTIVITY:</b>	MAY REACT IN CONTACT WITH INCOMPATIBLE MATERIALS.

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**6. TOXICOLOGICAL PROPERTIES**

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<b>ROUTES OF ENTRY:</b>	INHALATION, INGESTION, EYES AND SKIN CONTACT.
<b>EFFECTS OF ACUTE EXPOSURE:</b>	EYE CONTACT: IRRITATION OCCURS. SKIN CONTACT: MAY CAUSE MINOR IRRITATION. INGESTION – HARMFUL OR FATAL IF INGESTED. INHALATION – IRRITATION TO RESPIRATORY TRACT MAY OCCUR.
<b>EFFECTS OF CHRONIC EXPOSURE:</b>	LONG TERM OVER EXPOSURE TO HIGH CONCENTRATION OF VAPOUR WILL IRRITATE RESPIRATORY TRACT AND MAY CAUSE DAMAGE TO NERVOUS SYSTEM.
<b>EXPOSURE LIMITS:</b>	TWAEV 50ppm.



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**6. TOXICOLOGICAL PROPERTIES - CONT'D.....**

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**SENSITIZATION:** NOT KNOWN TO OCCUR.

**TOXICOLOGICALLY  
SYNERGISTIC PRODUCTS:** NONE KNOWN.

**OTHER HEALTH EFFECTS:** NONE KNOWN.

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**7. FIRST AID MEASURES**

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**SKIN CONTACT:** FLUSH WITH PLENTY OF WATER AND WASH WITH SOAP AND WATER.

**EYE CONTACT:** FLUSH WITH PLENTY OF WATER FOR AT LEAST 30 MINUTES.

**INGESTION:** DO NOT INDUCE VOMITING. CONSULT PHYSICIAN.

**INHALATION:** REMOVE TO FRESH AIR. RESTORE BREATHING IF NECESSARY.

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**8. PREVENTIVE MEASURES**

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**PERSONAL PROTECTIVE EQUIPMENT:**

**GLOVES:** NITRILE, NEOPRENE OR LATEX.

**RESPIRATORY:** RESPIRATOR FOR AREAS OF POOR VENTILATION.

**EYES:** CHEMICAL SPLASH GOGGLES OR FULL FACE SHIELD.

**FOOTWEAR:** ADEQUATE TO AVOID SKIN CONTACT.

**CLOTHING:** ADEQUATE TO AVOID SKIN CONTACT.

**VENTILATION:** MECHANICAL VENTILATION RECOMMENDED FOR INDOOR USE OR RESPIRATOR FOR AREAS OF HIGH CONCENTRATION.

**LEAK & SPILL  
PROCEDURES:** VENTILATE AREA. CLEAN UP PERSONNEL SHOULD WEAR PROTECTIVE EQUIPMENT. ABSORB WITH ABSORBANT MATERIAL AND SHOVEL INTO WASTE CONTAINERS.

**WASTE  
DISPOSAL:** HAZARDOUS WASTE MATERIAL. (1) DISPOSE IN COMPLIANCE WITH FEDERAL, STATE OR LOCAL ENVIRONMENTAL CONTROL REGULATIONS. (2) INCINERATE UNDER CONTROLLED CONDITIONS. (3) DISPOSE THROUGH A LICENCED WASTE DISPOSAL COMPANY.

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**8. PREVENTATIVE MEASURES - CONT'D.....**

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**HANDLING &  
STORAGE:**

STORE BETWEEN 5 ° C AND 50 ° C.

**SHIPPING  
INFORMATION:**

NO SPECIAL PROCEDURES.

**N.AP.** = NOT APPLICABLE,    **N.AV.** = NOT AVAILABLE.**DISCLAIMER**

"The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all national, federal, provincial, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection."



## **Hazard Communication Safety Data Sheet**

### **Section 1. Identification**

Item type: Woven Polypropylene Geotextile  
Distributor's Name : Moisture Mat

American Hydrotech, Inc.  
303 East Ohio Street, Suite 2700  
Chicago, IL 60611

Phone: 800-877-6125

Date Prepared/Revised:  
June 1<sup>st</sup>, 2015

### **Section 2. Hazard(s) identification**

Overview: No hazardous components in geotextile fabrics at or above threshold limit values. Polypropylene nonwoven fabrics are "articles" and are not hazardous under OSHA Hazard Communication Standard (29 CFR 1910.120). GHS Label Elements are not required.

### **Section 3. Composition/information on ingredients**

Ingredient Chemical Name (CAS#) Common Name	OSHA PEL or TWA	ACGIH TLV	Weight %
Polypropylene Resin (9003-07-0)	Not Applicable	Not Applicable	94 – 99%
Carbon Black (1333-86-4)	3.5 mg/cm TWA	3.5 mg/cm TWA	0 – 5%
Fatty Glycol and Additives (non-hazardous)	Not Applicable	Not Applicable	< 1%



#### **Section 4. First-aid measures**

Eye Contact: Flush with Water

Skin Contact: Treat as thermal burn if contact with molten. Wash with soap and water.

In case of irritation, consult a physician.

Inhalation: Not likely in current form.

Ingestion: Not likely in current form.

#### **Section 5. Fire-fighting measures**

Flash Point: > 600 degrees (F)

Extinguishing Media: Dry Chemical, CO<sub>2</sub>, Foam, Water, Halon

Special Fire Fighting Procedure:

Avoid Inhalation of Vapors

Use self-contained breathing apparatus when fire fighting in confined areas

Unusual Fire and Explosion Hazards:

Treat as a solid that can burn. Generally burns slowly with low smoke density and flaming drips.

Burns with high smoke density under certain conditions.

#### **Section 6. Accidental release measures**

No environmental threat is expected from release.

#### **Section 7. Handling and storage**

Handling: Practice reasonable care and caution in handling. Large rolls may require lifting devices.

Waste Disposal: Place in appropriate disposal facility in compliance with local regulation

Storage: In cool, dry locations away from oxidizing materials.



### **Section 8. Exposure controls/personal protection**

Use NIOSH respirators when hot/molten product.

Protective Gloves: Required when handling molten product

Practice general hygiene by washing hands and clothes after handling.

### **Section 9. Physical and chemical properties**

Boiling Point: Not Applicable

Vapor Pressure: Not Applicable

Specific Gravity: 0.9-0.905

Melting Point: 120-170 Degrees (C)

Vapor Density: Not Applicable

Evaporation Rate: Not Applicable

Solubility in Water: Not Applicable

Appearance and Odor: Essentially odorless; wound on cardboard core

### **Section 10. Stability and reactivity**

Material is stable. Hazardous polymerization will not occur. Do not store near heat, flame, or strong oxidants.

### **Section 11. Toxicological information**

Inhalation: Not likely under normal use.

Injection: Not likely under normal use.

Ingestion: Not likely in current form.

Skin Contact: Prolonged contact may cause mild skin irritations to some individuals.

Eye Effects: Not toxic, may irritate eyes.

Target Organs: None

Chronic: There are no known health effects from long term use or contact.

Carcinogenicity: The International Agency for Research on Cancer evaluation is that, "Carbon black (airborne, unbound particles of respirable size) is possibly carcinogenic to humans (Group 2B)".



## **Section 12. Ecological Information**

Environmental Data: Not expected to be hazardous to the environment in present form.

## **Section 13. Disposal Information**

Disposal: Spent material should be recycled or disposed according to current regulations. Does not contain RCRA regulated materials.

## **Section 14. Transport Information**

DOT Classification: Not regulated

Proper Shipping Name: Wrapped rolls of fabric made from synthetic fibers. NMFC 49265 Sub 9, Class 70.

## **Section 15. Regulatory Information**

USA TSCA: This product is considered an article and is exempt from TSCA Requirements.

Canada Domestic Substances List (DSL): This product is not specified on the DSL or NDSL.

### **SARA TITLE III:**

CERCLA/SARA (302) Extremely Hazardous Substances: None listed

SARA (311,312) Hazard Class: None listed      SARA (313) Chemicals: None listed

California Proposition 65: Carbon Black (airborne, unbound particles of respirable size), CAS# 1333-86-4 is listed as a possible carcinogen.

CANADA REGULATIONS (WHMIS): Not Listed



## **Section 16. Other Information**

Last Revised: July 1<sup>st</sup>, 2015

# Safety Data Sheet

## Monolithic Membrane 7800 (MM7800)

SDS Revision Date:

05/01//2015

### 1. Identification

#### 1.1. Product identifier

**Product Identity** Monolithic Membrane 7800

**Alternate Names** MM7800

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Intended use** See Technical Data Sheet.

**Application Method** See Technical Data Sheet.

#### 1.3. Details of the supplier of the safety data sheet

**Company Name** American Hydrotech, Inc.  
541 North Fairbanks Court, Suite 2700  
Chicago, IL 60611

#### Emergency

**PERS #11540 (USA)** (800) 633-8253

**24 hour Emergency Telephone No.**

**Customer Service: Hydrotech** (800) 877-6125

### 2. Hazard(s) identification

#### 2.1. Classification of the substance or mixture

Flam. Liq. 3;H226 Flammable liquid and vapor.  
Skin Sens. 1;H317 May cause an allergic skin reaction.

#### 2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



#### Warning

H226 Flammable liquid and vapor.  
H317 May cause an allergic skin reaction.



# Safety Data Sheet

## Monolithic Membrane 7800 (MM7800)

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### [Prevention]:

P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.

P235 Keep cool.

P240 Ground / bond container and receiving equipment.

P241 Use explosion-proof electrical / ventilating / light / equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P261 Avoid breathing dust / fume / gas / mist / vapors / spray.

P262 Do not get in eyes, on skin, or on clothing.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280 Wear protective gloves / eye protection / face protection.

### [Response]:

P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor / physician.

P302+352 IF ON SKIN: Wash with plenty of soap and water.

P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.

P313 Get medical advice / attention.

P321 Specific treatment (see information on this label).

P331 Do NOT induce vomiting.

P333+313 If skin irritation or a rash occurs: Get medical advice / attention.

P363 Wash contaminated clothing before reuse.

P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.

### [Storage]:

P403+233 Store in a well ventilated place. Keep container tightly closed.

### [Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

## 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Asphalt (petroleum) CAS Number: 0008052-42-4	25 - 50	Not Classified	[1][2]
Solvent naphtha (petroleum), light aromatic CAS Number: 0064742-95-6	25 - 50	Asp. Tox. 1;H304	[1]
Styrene-Butadiene polymer CAS Number: 0009003-55-8	10 - 25	Skin Sens. 1;H317	[1]

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

[1] Substance classified with a health or environmental hazard.

# Safety Data Sheet

## Monolithic Membrane 7800 (MM7800)

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[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

\*The full texts of the phrases are shown in Section 16.

### 4. First aid measures

#### 4.1. Description of first aid measures

<b>General</b>	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
<b>Inhalation</b>	If respiratory discomfort occurs, remove to fresh air. If discomfort continues, administer oxygen and get medical attention.
<b>Eyes</b>	Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.
<b>Skin</b>	If this product comes in contact with skin, remove material with mineral oil, then wash with soap and plenty of water.
<b>Ingestion</b>	If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

#### 4.2. Most important symptoms and effects, both acute and delayed

##### Overview

##### POTENTIAL HEALTH EFFECTS

**Eye Contact:** May cause tearing, stinging, redness, irritation, and burns.

**Inhalation:** Irritating to respiratory tract. Prolonged or repeated breathing of very high vapor concentrations cause euphoria, excitation, and dizziness, headaches, nausea, and vomiting, abdominal pain, fatigue, muscular weakness. Aspiration into the lungs can cause CNS (central nervous system) and subsequent aspiration into the lungs can cause pulmonary edema and chemical pneumonia depression. Chronic overexposure in high concentrations may produce CNS depression.

**Ingestion:** Irritation of the mouth, esophagus, and stomach can develop following ingestion. Symptoms include burning of the mouth, sore throat, vomiting, nausea, dizziness, loss of consciousness. Due to its light viscosity, there is danger of aspiration into the lungs during vomiting. Aspiration can result in severe lung damage or death.

**Skin Contact:** Prolonged or repeated skin contact may cause moderate to severe irritation including itching and redness of the skin, defatting, and/or dermatitis. This product can also be absorbed through the skin and produce CNS symptoms. Single prolonged exposure is not likely to result in the product being absorbed through the skin in harmful amounts.

**Signs And Symptoms Of Exposure:** Eye irritation, respiratory irritation, drying and cracking of skin, dizziness, fatigue, headache, unconsciousness or asphyxiation. Chronic effects of ingestion and subsequent aspiration into the lungs can cause pneumatocele (lung cavity) formation and chronic lung dysfunction. Repeated breathing of vapors can cause effects to liver and kidneys.

Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation

# Safety Data Sheet

## Monolithic Membrane 7800 (MM7800)

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and soreness with possible reversible damage. See section 2 for further details.

### Skin

May cause an allergic skin reaction.

## 5. Fire-fighting measures

### 5.1. Extinguishing media

Use dry chemicals, carbon dioxide foam, water fog, or inert gas (nitrogen) for small fires. For large fires use foam, water fog, or water spray. Water fog and spray are effective in cooling containers and adjacent structures but might cause frothing and/or not achieve extinguishment. A water jet may be used to cool the container's external walls to prevent pressure build-up, auto ignition, or explosion. NEVER use a water jet directly on the fire. Product will float and can be re-ignited on surface of water.

### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: High temperatures and fires may produce such toxic substances as carbon monoxide and carbon dioxide.

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

Keep cool.

Ground / bond container and receiving equipment.

Use explosion-proof electrical / ventilating / light / equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust / fume / gas / mist / vapors / spray.

Do not get in eyes, on skin, or on clothing.

### 5.3. Advice for fire-fighters

When heated above flash point, material will release flammable vapors which can burn or be explosive in confined spaces if ignited. Do not mix with strong oxidants such as liquid chlorine or concentrated oxygen.

Minimize breathing vapors, gases or fumes of decomposition products. Do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

ERG Guide No. 130

## 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

### 6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

### 6.3. Methods and material for containment and cleaning up

Eliminate sources of ignition, and ventilate the area. Add sand or earth or absorb spill with suitable absorbent material and place in a closed container.

Keep product out of sewers and waterways by diking or impounding. Advise authorities if product has entered or may

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## Monolithic Membrane 7800 (MM7800)

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enter sewers or waterways. Assure conformity with applicable governmental regulations.

Eliminate ignition sources. Soak up with noncombustible absorbent material. Remove absorbent material for proper disposal.

### 7. Handling and storage

#### 7.1. Precautions for safe handling

The requirements of the Highly Flammable Liquids and Liquefied Petroleum Gases Regulations apply if the flashpoint is between 21°C and 32°C.

See section 2 for further details. - [Prevention]:

#### 7.2. Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.

Naked flames and smoking should not be permitted in storage areas. It is recommended that fork lift trucks and electrical equipment are protected to the appropriate standard.

Incompatible materials: Strong acids, alkalis, and oxidizers such as liquid chlorine, halogens, hydrogen peroxide, oxygen.

**Other Precautions:** All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Do not reuse containers. Empty containers may contain material residues which can ignite with explosive force. Cutting or welding of empty containers can cause fire, explosion, or release fumes from residues. Keep containers closed and drum bungs in place. Dispose of in a licensed facility.

See section 2 for further details. - [Storage]:

#### 7.3. Specific end use(s)

Health studies have shown that many petroleum hydrocarbons pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids, vapors, mists or fumes should be minimized.

### 8. Exposure controls and personal protection

#### 8.1. Control parameters

##### Exposure

CAS No.	Ingredient	Source	Value
0008052-42-4	Asphalt (petroleum)	OSHA	No Established Limit
		ACGIH	TWA: 0.5 mg/m <sup>3</sup> 2B
		NIOSH	Ca C 5 mg/m <sup>3</sup> [15-minute]
		Supplier	No Established Limit
0009003-55-8	Styrene-Butadiene polymer	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0064742-95-6	Solvent naphtha (petroleum), light aromatic	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit

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### Carcinogen Data

CAS No.	Ingredient	Source	Value
0008052-42-4	Asphalt (petroleum)	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: Yes; Group 3: No; Group 4: No;
0009003-55-8	Styrene-Butadiene polymer	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: Yes; Group 4: No;
0064742-95-6	Solvent naphtha (petroleum), light aromatic	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

### 8.2. Exposure controls

#### Respiratory

If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.

#### Eyes

Safety glasses or face shield for liquid material.

#### Skin

Wear nitrile or similar chemical resistant gloves to keep skin contact to a minimum. Refer to the manufacturer's recommendations regarding the suitability of any gloves used.

#### Engineering Controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

#### Other Work Practices

Long sleeves and impervious clothing to protect against splashing. Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

## 9. Physical and chemical properties

#### Appearance

Dark Liquid

#### Odor

Mild Petroleum

#### Odor threshold

Not Measured

#### pH

Not Measured

#### Melting point / freezing point

NA

#### Initial boiling point and boiling range

300-350F

#### Flash Point

(PMCC): 104F min.

#### Evaporation rate (Ether = 1)

(Butyl Acetate=1)@77F: 0.2

#### Flammability (solid, gas)

Not Applicable

#### Upper/lower flammability or explosive limits

**Lower Explosive Limit:** Not Measured

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**Vapor pressure (Pa)**

**Vapor Density**

**Specific Gravity**

**Solubility in Water**

**Partition coefficient n-octanol/water (Log Kow)**

**Auto-ignition temperature**

**Decomposition temperature**

**Viscosity (cSt)**

**Upper Explosive Limit:** Not Measured

3

(Air=1): > 4

(H<sub>2</sub>O=1): 0.8 - 1.2

Insoluble

Not Measured

Not Measured

Not Measured

Not Measured

### 9.2. Other information

No other relevant information.

## 10. Stability and reactivity

### 10.1. Reactivity

Hazardous Polymerization will not occur.

### 10.2. Chemical stability

Stable under normal circumstances.

### 10.3. Possibility of hazardous reactions

No data available.

### 10.4. Conditions to avoid

Excessive heat and open flame.

### 10.5. Incompatible materials

Strong acids, alkalis, and oxidizers such as liquid chlorine, halogens, hydrogen peroxide, oxygen.

### 10.6. Hazardous decomposition products

High temperatures and fires may produce such toxic substances as carbon monoxide and carbon dioxide.

## 11. Toxicological information

### Acute toxicity

Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage.

Based upon animal testing, the C9 aromatic hydrocarbon components (trimethylbenzenes and ethylmethylbenzenes) are presumed to cause fetal toxicity and/or decreased fetal and newborn weights if overexposure occurs during the early gestation period.

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## Monolithic Membrane 7800 (MM7800)

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Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Asphalt (petroleum) - (8052-42-4)	No data available	No data available	No data available	No data available	No data available
Solvent naphtha (petroleum), light aromatic - (64742-95-6)	6,800.00, Rat - Category: NA	3,400.00, Rabbit - Category: 5	No data available	No data available	No data available
Styrene-Butadiene polymer - (9003-55-8)	No data available	No data available	No data available	No data available	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	---	Not Applicable
Serious eye damage/irritation	---	Not Applicable
Respiratory sensitization	---	Not Applicable
Skin sensitization	1	May cause an allergic skin reaction.
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

## 12. Ecological information

### 12.1. Toxicity

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and GHS and is not classified as dangerous for the environment, but contains substance(s) dangerous for the environment. See section 3 for details

### Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Asphalt (petroleum) - (8052-42-4)	Not Available	Not Available	Not Available
Solvent naphtha (petroleum), light aromatic - (64742-95-6)	9.22, Oncorhynchus mykiss	6.14, Daphnia magna	19.00 (72 hr), Selenastrum capricornutum
Styrene-Butadiene polymer - (9003-55-8)	Not Available	Not Available	Not Available

# Safety Data Sheet

## Monolithic Membrane 7800 (MM7800)

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### 12.2. Persistence and degradability

There is no data available on the preparation itself.

### 12.3. Bioaccumulative potential

Not Measured

### 12.4. Mobility in soil

No data available.

### 12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

### 12.6. Other adverse effects

No data available.

## 13. Disposal considerations

### 13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

## 14. Transport information

	DOT (Domestic Ground Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	UN1999	UN1999	UN1999
14.2. UN proper shipping name	Not regulated, non-bulk	Tars, liquid including road oils and cutback bitumens	Tars, liquid including road oils and cutback bitumens
14.3. Transport hazard class(es)		IMDG: 3	Air Class: 3
14.4. Packing group		III EmS No. F-E, S-E	III
14.5. Environmental hazards		IMDG: Marine Pollutant: No	Air Class: 3
14.6. Special precautions for user		ERG Guide 130	ERG Guide 130

## 15. Regulatory information

Regulatory Overview	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.
Toxic Substance Control Act ( TSCA)	All components of this material are either listed or exempt from listing on the TSCA Inventory.
WHMIS Classification	B3 D2B



# Safety Data Sheet

## Monolithic Membrane 7800 (MM7800)

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### US EPA Tier II Hazards

Fire: Yes

Sudden Release of Pressure: No

Reactive: No

Immediate (Acute): Yes

Delayed (Chronic): No

### EPCRA 311/312 Chemicals and RQs:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

### EPCRA 302 Extremely Hazardous:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

### EPCRA 313 Toxic Chemicals:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

### Proposition 65 - Carcinogens (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

### Proposition 65 - Developmental Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

### Proposition 65 - Female Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

### Proposition 65 - Male Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

### New Jersey RTK Substances (>1%):

Asphalt (petroleum)

### Pennsylvania RTK Substances (>1%):

Asphalt (petroleum)

## 16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H304 May be fatal if swallowed and enters airways.

H317 May cause an allergic skin reaction.

**This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.**

Disclaimer: This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. The information has been completed to the best of our knowledge and is believed to be accurate and reliable as from the date indicated. However, no warranty is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy oneself as to the suitability and completeness of such information for his own particular use.

End of Document



AMERICAN HYDROTECH, INC.  
303 East Ohio Street  
Chicago, Illinois 60611  
(312) 337-4998 1-96

MONOLITHIC MEMBRANE 7800  
PRIMER LS

## SECTION I

CHEMICAL NAME & SYNONYMS: N. App.  
CHEMICAL FAMILY: N. App.  
TRADE NAME & SYNONYMS: Monolithic Membrane 7800 Primer LS  
FORMULA: N. Av.

## SECTION II – HAZARDOUS INGREDIENTS

INGREDIENT	C.A.S. #	%	TLV EXPOSURE LIMITS
ASPHALT	8052-42-4	45-55	PEL: 5mg/m <sup>3</sup> ; TLV: 5mg/m <sup>3</sup>
PETROLEUM HYDROCARBONS	64742-95-6	25-35	PEL: 100 ppm; TLV: 100 ppm
STYRENE-BUTADIENE BLOCK COPOLYMER	9003-55-8	2-7	N. App.
*1,2,4 – TRIMETHYLBENZENE	95-63-6	12	TWA: 25 ppm
*XYLENE	1330-20-7	5	TWA: 100 ppm; STEL: 150 ppm
*CUMENE	98-82-8	3	TWA: 50 ppm
ETHYLBENZENE	100-41-4	<1	TWA: 100 ppm; STEL: 125 ppm
POLYALICYCLIC RESIN	69430-35-9	<1	N. App.

\* indicates toxic chemicals subject to the reporting requirements of section 313 of Title III and of 40 CFR 362

## SECTION III – PHYSICAL DATA

BOILING POINT (°F):	315	PERCENT VOLATILE BY VOLUME:	N. App.
VAPOR PRESSURE (mmHg @ 20°C):	N. App.		
VAPOR DENSITY (AIR=1):	>1	EVAPORATION RATE (BUTYL ACETATE=1):	<1
SPECIFIC GRAVITY (H <sub>2</sub> O=1):	0.94		

SOLUBILITY IN WATER: Negligible  
APPEARANCE AND ODOR: Black liquid, mild solvent odor

## SECTION IV – FIRE AND EXPLOSION HAZARDS

FLASH POINT (METHOD USED): 107°F (PMCC)  
FLAMMABLE LIMITS: Lower: 1 Upper: 6

EXTINGUISHING MEDIA: Foam, CO<sub>2</sub>, dry chemical, water fog  
SPECIAL FIRE FIGHTING PROCEDURES: Positive pressure, self-contained breathing apparatus (SCBA) and structural firefighters protective clothing will provide limited protection.

UNUSUAL FIRE/EXPLOSION HAZARDS: Flammable/combustible material; may be ignited by heat, sparks or flame. Vapors may travel to a source of ignition and flash back. Containers may explode in heat or fire. Vapor explosion hazard indoors, outdoors or in sewers. Runoff to sewers may create fire or explosion hazard.

**SECTION V – HEALTH HAZARD DATA**

THRESHOLD LIMIT VALUE(S): N. App.

SIGNS/SYMPTOMS/EFFECTS OF OVEREXPOSURE: Severe irritation, redness, tearing and blurred vision. Moderate irritation, defatting and dermatitis of the skin. Respiratory irritation, dizziness, fatigue, nausea, headache and possible unconsciousness. Gastrointestinal irritation, nausea, vomiting and diarrhea.

EMERGENCY AND FIRST AID PROCEDURES:

EYES: Immediately flush with water for at least 15 minutes

SKIN: Wash with soap and water

INHALATION: Move victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult give oxygen

INGESTIONS: Seek medical aid

**SECTION VI – REACTIVITY DATA**

STABILITY: Stable

CONDITIONS TO AVOID: Extreme heat, open flames

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID: N. App.

INCOMPABILITY (MATERIALS TO AVOID): Oxidizers, heat and open flames

HAZARDOUS DECOMPOSITION PRODUCTS: Fire may produce poisonous gases

**SECTION VII – SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Small leaks: take up with sand or other noncombustible absorbent material and place into containers for disposal. Large leaks: dike far ahead of liquid spill for later disposal.

WASTE DISPOSAL METHODS: Incinerate under safe conditions or dispose of in accordance with state and federal regulations.

**SECTION VIII – SPECIAL PROTECTION INFORMATION**

VENTILATION (TYPE): Local exhaust recommended

RESPIRATORY PROTECTION: Wear respirator in confined spaces

PROTECTIVE CLOTHING & EQUIPMENT: Work gloves, safety glasses or goggles

**SECTION IX – SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Do not breathe vapors. Use with adequate ventilation. Do not take internally. Don't get in eyes, Wear impervious clothing. Keep away from heat and flame.

*Information presented herein has been compiled from sources considered to be dependable and current, and is accurate and reliable to the best of our knowledge, but is not guaranteed to be so. It is the user's responsibility to determine for himself the suitability of this information for his safe use of this product, and to adopt such proper safety precautions as may be necessary to provide adequate worker and plant protection.*

# Safety Data Sheet Granite

## Section 1. Identification

<b>GHS product identifier:</b>	Granite
<b>Other means of identification:</b>	Aggregate, Manufactured Sand, Natural Stone, Crushed Stone
<b>Relevant identified uses of the substance or mixture and uses advised against:</b>	Granite aggregate may be used in the manufacture of bricks, mortar, cement, concrete, plasters, paving materials, and other construction materials. Granite aggregate may be distributed in bags, totes, and bulk shipments. No known recommended restrictions.
<b>Supplier's details:</b>	300 E. John Carpenter Freeway, Suite 1645 Irving, TX 75062 (972) 653-5500
<b>Emergency telephone number (24 hours):</b>	<b>CHEMTREC: (800) 424-9300</b>

## Section 2. Hazards Identification

<b>GHS Classification:</b>	CARCINOGENICITY – Category 1A; H350 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) – Category 2; H335 SKIN CORROSION/IRRITATION – Category 1C; H314 SERIOUS EYE DAMAGE/EYE IRRITATION – Category 1; H318
----------------------------	---

### GHS label elements

#### Hazard pictograms:



<b>Signal word:</b>	Danger
<b>Hazard statements:</b>	May cause cancer May cause damage to organs (lung) through prolonged or repeated exposure Causes skin irritation Causes serious eye irritation

#### Precautionary statements:

<b>Prevention:</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash any exposed body parts. Wear protective gloves/protective clothing/eye protection/face protection.
<b>Response:</b>	If exposed or concerned: Get medical advice/attention. If on skin: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If in eyes: Rinse continuously with water for several minutes. Remove contact lenses, if present and easy to do.
<b>Storage:</b>	Restrict or control access to stockpile areas (store locked up). Engulfment hazard: To prevent burial or suffocation, do not enter a confined space, such as a silo, bulk truck or other storage container or vessel that stores or contains aggregates without an effective procedure for assuring safety.
<b>Disposal:</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazards not otherwise classified (HNOC):</b>	None known

#### Supplemental Information:

Respirable Crystalline Silica (RCS) may cause cancer. Granite is a naturally occurring mineral complex that contains varying quantities of quartz (crystalline silica). In its natural bulk state, granite is not a known health hazard. Granite may be subjected to various natural or mechanical forces that produce small particles (dust) which may contain respirable crystalline silica (particles less than 10 micrometers in aerodynamic diameter). Repeated inhalation of respirable crystalline silica (quartz) may cause lung cancer according to IARC and NTP; ACGIH states that it is a suspected cause of cancer. Other forms of RCS (e.g., tridymite and cristobalite) may also be present or formed under certain industrial processes.

## Section 3. Composition/information on ingredients

### CAS number/other identifiers

**Substance/mixture:** Granite

Ingredient name	%	CAS number
Granite	> 99	None
Crystalline Silica (Quartz)	> 1	14808-60-7

Any concentration shown as a range is to protect confidentiality or is due to process variation. There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section. These materials are mined from the earth. Trace amounts of naturally occurring elements might be detected during chemical analysis of these materials.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

<b>Eye Contact:</b>	Dust: Immediately flush with plenty of water for at least 15 minutes. Hold eyelids apart. Remove contacts if present and easy to do. Occasionally lift the eyelid(s) to ensure thorough rinsing. Beyond flushing, do not attempt to remove material from the eye(s). Get medical attention if irritation develops or persists.
<b>Inhalation:</b>	Dust: Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin Contact:</b>	Dust: Wash off with soap and water. Get medical attention if irritation develops and persists.
<b>Ingestion:</b>	Dust: Rinse mouth and drink plenty of water. Never give anything by mouth to an unconscious person. Get medical attention.

### Most important symptoms/effects, acute and delayed

Inhaling dust may cause discomfort in the chest, shortness of breath, and coughing. Prolonged inhalation may cause chronic health effects. This product contains crystalline silica. Prolonged or repeated inhalation of respirable crystalline silica liberated from this product can cause silicosis, and may cause cancer.

### Indication of immediate medical attention and special treatment needed, if necessary

<b>Notes to physician:</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>Specific treatments:</b>	Not Applicable
<b>Protection of first-aiders:</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
<b>General information:</b>	Pre-existing medical conditions that may be aggravated by exposure include disorders of the eye, skin and lung (including asthma and other breathing disorders). If addicted to tobacco, smoking will impair the ability of the lungs to clear themselves of dust.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

<b>Suitable extinguishing media:</b>	Not flammable. Use fire-extinguishing media appropriate for surrounding materials.
<b>Unsuitable extinguishing media:</b>	None known.
<b>Specific hazards arising from the chemical:</b>	No unusual fire or explosion hazards noted. Not a combustible dust.
<b>Hazardous thermal decomposition Products:</b>	None known
<b>Special protective equipment for fire-fighters:</b>	Use protective equipment appropriate for surrounding materials. No specific precautions.
<b>General fire hazards:</b>	Contact with powerful oxidizing agents may cause fire and/or explosions (see section 10 of SDS). No unusual fire or explosion hazards.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Wear appropriate protective equipment and clothing during clean-up of materials that contain or may liberate dust.

### Methods and materials for containment, cleaning up and Environmental precautions

Spilled material, where dust is generated, may overexpose cleanup personnel to respirable crystalline silica-containing dust. Do not dry sweep or use compressed air for clean-up. Wetting of spilled material and/or use of respiratory protective equipment may be necessary. Avoid discharge of fine particulate matter into drains or water courses.

## Section 7. Handling and storage

### Precautions for safe handling

<b>Protective measures:</b>	Do not handle until all safety precautions have been read and understood. Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment.
<b>Advice on general occupational hygiene:</b>	Observe good industrial hygiene practices. Promptly remove dusty clothing and launder before reuse.
<b>Conditions for safe storage, including any incompatibilities:</b>	Avoid dust formation or accumulation.

## Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
Particulates not otherwise classified (CAS SEQ250)	<b>ACGIH TLV (United States, Canada)</b> TWA: 3 mg/m <sup>3</sup> . Form: Respirable particles TWA: 10 mg/m <sup>3</sup> . Form: Inhalable particles <b>OSHA PEL (United States)</b> PEL: 5 mg/m <sup>3</sup> . Form: Respirable fraction PEL: 15 mg/m <sup>3</sup> . Form: Total dust <b>MSHA PEL (United States)</b> PEL: 5 mg/m <sup>3</sup> . Form: Respirable fraction PEL: 10 mg/m <sup>3</sup> . Form: Total dust
Crystalline Silica (Quartz) (CAS 14808-60-7)	<b>ACGIH TLV (United States)</b> TWA: 0.025 mg/m <sup>3</sup> . Form: Respirable fraction <b>OSHA PEL (United States)</b> TWA: 0.05 mg/m <sup>3</sup> . Form: Respirable <b>MSHA PEL (United States)</b> TWA: 10/(%SiO <sub>2</sub> + 2) in mg/m <sup>3</sup> <b>Provincial Exposure Limits (Canada, various)</b> <ul style="list-style-type: none"> <li>▪ <b>Alberta (OHS Code)</b> 0.025 mg/m<sup>3</sup> 8 hour TWA</li> <li>▪ <b>British Columbia (WorkSafeBC OHS Regulation)</b> 0.025 mg/m<sup>3</sup> 8 hour TWA</li> <li>▪ <b>British Columbia (Health, Safety &amp; Reclamation Code, Mines Act)</b> 0.1 mg/m<sup>3</sup> 8 hour TWA</li> <li>▪ <b>Manitoba (Workplace Safety and Health Regulation)</b> 0.025 mg/m<sup>3</sup> 8 hour TWA</li> <li>▪ <b>New Brunswick</b> 0.025 mg/m<sup>3</sup> 8 hour TWA</li> <li>▪ <b>Newfoundland</b> 0.025 mg/m<sup>3</sup> 8 hour TWA</li> <li>▪ <b>Nova Scotia</b> 0.025 mg/m<sup>3</sup> 8 hour TWA</li> <li>▪ <b>Ontario (O. Reg 490/09; and O. Reg. 833)</b> 0.1 mg/m<sup>3</sup> 8 hour TWA</li> </ul>

- **Prince Edward Island**  
0.025 mg/m<sup>3</sup> 8 hour TWA
- **Quebec (Regulation Respecting OHS, Chapter S-2.1, r. 13)**  
0.1 mg/m<sup>3</sup> 8 hour TWA
- **Saskatchewan (OHS Regulations)**  
0.05 mg/m<sup>3</sup> 8 hour TWA

<b>Appropriate engineering controls:</b>	Good general ventilation (typically 10 air changes per hour indoors) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
<b>Exposure guidelines:</b>	OSHA PELs, MSHA PELs, and ACGIH TLVs are 8-hr TWA values. Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled. Terms including "Particulates Not Otherwise Classified," "Particulates Not Otherwise Regulated," "Particulates Not Otherwise Specified," and "Inert or Nuisance Due" are often used interchangeably; however, the user should review each agency's terminology for differences in meanings.
<b>Biological limit values:</b>	No biological exposure limits noted for the ingredient(s)

## Individual protection measures

<b>Hygiene measures:</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.
<b>Eye/face protection:</b>	Wear safety glasses with side shields (or goggles).
<b>Hand protection:</b>	Use personal protective equipment as required.
<b>Body protection:</b>	Use personal protective equipment as required.
<b>Other skin protection:</b>	Use personal protective equipment as required.
<b>Respiratory protection:</b>	When handling or performing work that produces dust or respirable crystalline silica in excess of applicable exposure limits, wear a NIOSH-approved respirator that is properly fitted and is in good condition. Respirators must be used in accordance with all applicable workplace regulations.
<b>Thermal hazards:</b>	Not anticipated. Wear appropriate thermal protective clothing if necessary.

## Section 9. Physical and chemical properties

### Appearance

<b>Physical State:</b>	Solid, angular, particles of granular mixture	<b>Lower and Upper explosive flammable limits</b>	Not applicable
<b>Color:</b>	Various colors, salt and pepper	<b>Vapor pressure:</b>	Not applicable
<b>Odor:</b>	Not applicable	<b>Vapor density:</b>	Not applicable
<b>Odor threshold:</b>	Not applicable	<b>Relative density:</b>	Not available
<b>pH:</b>	Not available	<b>Solubility:</b>	Not available
<b>Melting point:</b>	Not applicable	<b>Solubility in water:</b>	Insoluble
<b>Boiling point:</b>	Not applicable	<b>Partition coefficient: n-octanol/water:</b>	Not applicable
<b>Flash point:</b>	Non-combustible	<b>Auto-ignition temperature:</b>	Not applicable
<b>Burning time:</b>	Not applicable	<b>Decomposition temperature:</b>	Not applicable
<b>Burning rate:</b>	Not applicable	<b>SADT:</b>	Not available
<b>Evaporation Rate:</b>	Not applicable	<b>Viscosity:</b>	Not applicable
<b>Flammability (solid, gas):</b>	Not applicable		

## Section 10. Stability and reactivity

<b>Reactivity:</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical Stability:</b>	Material is stable under normal conditions
<b>Possibility of hazardous reactions:</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid:</b>	Avoid contact with strong oxidizing agents.
<b>Incompatible materials:</b>	Crystalline silica may react violently with strong oxidizing agents, causing fire and explosions.
<b>Hazardous decomposition products:</b>	Silica dissolves in hydrofluoric acid producing a corrosive gas-silicon tetrafluoride.

## Section 11. Toxicological information

### Information on toxicological effects

<b>Acute toxicity:</b>	Not expected to be acutely toxic.
<b>Irritation/Corrosion:</b>	<b>Skin:</b> Dust: May cause irritation through mechanical abrasion. This product is not expected to be a skin hazard. <b>Eyes:</b> Direct contact with eyes may cause temporary irritation through mechanical abrasion.
	<b>Inhalation:</b> Repeated inhalation of respirable crystalline silica (quartz) may cause silicosis, a fibrosis (scarring) of the lungs. Silicosis is irreversible and may be fatal. Silicosis increases the risk of contracting pulmonary tuberculosis. Some studies suggest that repeated inhalation of respirable crystalline silica may cause other adverse health effects including lung and kidney cancer.
	<b>Ingestion:</b> Not likely due to product form. However accidental ingestion may cause discomfort.
<b>Sensitization:</b>	<b>Respiratory sensitization:</b> No respiratory sensitizing effects known.
	<b>Skin sensitization:</b> Not known to be a dermal irritant or sensitizer.
<b>Mutagenicity:</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Aspiration Hazard:</b>	Not expected to be an aspiration hazard.
<b>Reproductive toxicity:</b>	Not expected to be a reproductive hazard.
<b>Symptoms related to physical, chemical and toxicological characteristics:</b>	Dust: discomfort in the chest. Shortness of breath. Coughing.
<b>Carcinogenicity:</b>	Respirable crystalline silica has been classified by IARC and NTP as a known human carcinogen, and classified by ACGIH as a suspected human carcinogen.

Product/ingredient name	OSHA	IARC	ACGIH	NTP
Crystalline Silica (Quartz) CAS 14808-60-7)	Listed	1 Carcinogenic to humans	A2	Known to be human Carcinogen

#### Specific target organ toxicity (acute exposure)

Name	Category	Route of Exposure	Target Organs
Crystalline Silica (Quartz) CAS 14808-60-7)	-	Inhalation	Not reported to have effects

#### Specific target organ toxicity (chronic exposure)

Name	Category	Route of Exposure	Target Organs
Crystalline Silica (Quartz) CAS 14808-60-7)		Inhalation	May cause damage to organs (lung through prolonged or repeated exposure.

**Potential chronic health effects: General:** Prolonged inhalation of respirable crystalline silica may be harmful. May cause damage to organs (lungs) through prolonged or repeated exposure. There are reports in the literature suggesting that excessive crystalline silica exposure may be associated with autoimmune disorders and other adverse health effects involving the kidney. In particular, the incidence of scleroderma (thickening of the skin caused by swelling and the thickening of fibrous tissue) appears to be higher in silicotic individuals. To date, the evidence does not conclusively determine a causal relationship between silica exposure and these adverse health effects.

## Section 12. Ecological Information

### Ecotoxicity

Not expected to be harmful to aquatic organisms. Discharging granite dust and fines into waters may increase total suspended particulate (TSP) levels that can be harmful to certain aquatic organisms.

<b>Persistence and degradability:</b>	Not applicable.
<b>Bioaccumulative potential:</b>	Not applicable.
<b>Mobility in soil:</b>	Not applicable.
<b>Other adverse effects:</b>	No other adverse environmental effects (e.g., ozone depletion, photochemical ozone creation potential, global warming potential) are expected from this component.



## Section 13. Disposal considerations

<b>Disposal methods:</b>	Do not allow fine particulate matter to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with fine particulates. Dispose of contents in accordance with local/regional/national/international regulations.
<b>Hazardous waste code:</b>	Not regulated.
<b>Waste from residues/unused products:</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.
<b>Contaminated packaging:</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty packaging materials should be recycled or disposed of in accordance with applicable regulations and practices.

## Section 14. Transportation information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	-	-	-
Canada TDG	-	-	-
Additional information	-	-	-

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

## Section 15. Regulatory Information

<b>U.S. Federal regulations:</b>	
<b>OSHA Hazard Communication Standard, 29 CFR 1910.1200</b>	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200
<b>TSCA Section 12(b) Export Notification (40 CFR 707, Subpart. D):</b>	Not regulated
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):</b>	Listed
<b>CERCLA Hazardous Substance List (40 CFR 302.4):</b>	Not listed
<b>Clean Air Act Section 112 (b): Hazardous Air Pollutants (HAPs):</b>	Not regulated
<b>Clean Air Act Section 112 (r) Accidental Release Prevention (40 CFR 68.130):</b>	Not regulated
<b>Safe Drinking Water Act (SDWA):</b>	Not regulated
<b>Canada Federal regulations:</b>	
<b>NSNR Status:</b>	Listed on DSL or exempt

## SARA 311/312

**Classification:** Delayed (chronic) health hazard

**Composition/information on ingredients**

Name	%	Fire Hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Crystalline Silica (Quartz) CAS 14808-60-7	>1	No	No	No	No	Yes

## SARA 313 (TRI)

	Product name	CAS number	%
Form R-Report requirements	Crystalline Silica (Quartz)	14808-60-7	Not regulated

## State regulations

<b>Massachusetts RTK:</b>	The following components are listed: Crystalline Silica (Quartz) (CAS 14808-60-7), Respirable Tridymite and Cristobalite (other forms of crystalline silica) (CAS Mixture)
<b>New Jersey RTK:</b>	The following components are listed: Crystalline Silica (Quartz) (CAS 14808-60-7), Respirable Tridymite and Cristobalite (other forms of crystalline silica) (CAS mixture)
<b>Pennsylvania RTK:</b>	The following components are listed: Crystalline Silica (Quartz) (CAS 14808-60-7), Respirable Tridymite and Cristobalite (other forms of crystalline silica) (CAS Mixture)
<b>Rhode Island RTK:</b>	Not regulated.

## California Prop. 65

WARNING: This product contains crystalline silica and chemicals (trace metals) known to the State of California to cause cancer.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Crystalline Silica (Quartz) CAS 14808-60-7	Yes	No	No	No

## International regulations

Ingredient name	CAS #	TSCA	Canada	WHMIS	EEC
Crystalline Silica (Quartz)	14808-60-7	Yes	DSL	D2A	EINECS

**WHMIS Classification:** D2A "Materials Causing Other Toxic Effects"



## Section 16. Other Information

**Date of issue:** 01/01/2022

**Replaces:** 07/01/2018

**Revised Section(s):** Section 8, 1, 14, 15

## Notice to reader

While the information provided in this safety data sheet is believed to provide a useful summary of the hazards of granite as it is commonly used, the sheet cannot anticipate and provide all of the information that might be needed in every situation. Inexperienced product users should obtain proper training before using this product. In particular, the data furnished in this sheet do not address hazards that may be posed by other materials mixed with granite to produce granite products. Users should review other relevant material safety data sheets before working with this granite or working on granite products.

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY Lehigh Hanson, except that the product shall conform to contracted specifications. The information provided herein was believed by the Lehigh Hanson to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information to comply with all laws and procedures applicable to the safe handling and use of product and to determine the suitability of the product for its intended use. Buyer's exclusive remedy shall be for damages and no claim of any kind, whether as to product delivered or for non-delivery of product, and whether based on contract, breach of warranty, negligence, or otherwise shall be

greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

## Abbreviations

ACGIH — American Conference of Governmental Industrial Hygienists  
CAS — Chemical Abstract Service  
CERCLA — Comprehensive Emergency Response and Comprehensive Liability Act  
CFR — Code of Federal Regulations  
DOT — Department of Transportation  
GHS — Globally Harmonized System  
HEPA — High Efficiency Particulate Air  
IATA — International Air Transport Association  
IARC — International Agency for Research on Cancer  
IMDG — International Maritime Dangerous Goods  
NIOSH — National Institute of Occupational Safety and Health  
NOEC — No Observed Effect Concentration  
NTP — National Toxicology Program  
OSHA — Occupational Safety and Health Administration  
PEL — Permissible Exposure Limit  
REL — Recommended Exposure Limit  
RQ — Reportable Quantity  
SARA — Superfund Amendments and Reauthorization Act  
SDS — Safety Data Sheet  
TLV — Threshold Limit Value  
TPQ — Threshold Planning Quantity  
TSCA — Toxic Substances Control Act  
TWA — Time-Weighted Average  
UN — United Nations



AMERICAN HYDROTECH, INC.

## SAFETY DATA SHEET

### Permaboard

Notice: New GHS Standard Requirements  
Material Safety Data Sheets (MSDS) / Safety Data Sheets (SDS)

The OSHA Hazard Communication Standard (29 CFR 1910.1200) was recently updated to require that Material Safety Data Sheets (MSDS) for hazardous chemical products be updated by June 1, 2015 to meet the updated Globally Harmonized System of Classification and Labeling of Chemicals (GHS) format and content requirements for Safety Data Sheets (SDS).

**Permaboard** supplied by American Hydrotech are not classified as a hazardous chemical under the 1910.1200 rule. **Permaboard** meet the OSHA definition of manufactured “articles” (1910.1200(c)) that will not expose users to hazardous chemicals under normal and expected conditions of use, and are therefore exempt from all requirements of the rule, including the requirement to produce an SDS (1910.1200(b)(6)(v)).

American Hydrotech will continue to provide product data sheets for each of our products. However, effective immediately we will no longer provide SDS for those products that are not classified as hazardous chemicals as outlined in the new GHS standard.

For more information on OSHA Hazard Communication Standard (29 CFR 1910.1200), please visit [www.osha.gov](http://www.osha.gov).



AMERICAN HYDROTECH, INC.

## SAFETY DATA SHEET

### ROOT STOP

Notice: New GHS Standard Requirements  
Material Safety Data Sheets (MSDS) / Safety Data Sheets (SDS)

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**Root Stop** supplied by American Hydrotech is not classified as a hazardous chemical under the 1910.1200 rule. **Root Stop** meets the OSHA definition of manufactured “articles” (1910.1200(c)) that will not expose users to hazardous chemicals under normal and expected conditions of use, and are therefore exempt from all requirements of the rule, including the requirement to produce an SDS (1910.1200(b)(6)(v)).

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<b>SAFETY DATA SHEET</b>		Revision Date: 07/01/2015
AMERICAN HYDROTECH, INC.		Print Date: 8/26/2015
SPLICING CEMENT		SDS Number: R0252592
		Version: 2.0

systemic toxicity - repeated exposure (Inhalation)

auditory dysfunction and effects on colour vision))

#### GHS Label element

Hazard pictograms



Signal Word

: Danger

Hazard Statements

: Highly flammable liquid and vapor.  
Causes skin irritation.  
Causes serious eye irritation.  
May cause drowsiness or dizziness.  
Suspected of causing cancer if inhaled.  
Suspected of damaging fertility or the unborn child.  
Causes damage to organs (Nervous system, Neurologic: other (neuropsychological effects, auditory dysfunction and effects on colour vision)) through prolonged or repeated exposure if inhaled.  
May cause damage to organs (Auditory system) through prolonged or repeated exposure.

Precautionary Statements

: **Prevention:**  
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.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.  
Wash skin thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**Response:**  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician 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 exposed or concerned: Get medical advice/ attention.  
If skin irritation occurs: Get medical advice/ attention.  
If eye irritation persists: Get medical advice/ attention.

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		Version: 2.0

Take off contaminated clothing and wash before reuse.  
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

**Storage:**

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

**Disposal:**

Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

Static Accumulating liquid

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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

Chemical nature : Static Accumulator

Chemical nature : Defatter

**Hazardous components**

Chemical Name	CAS-No.	Classification	Concentration (%)
TOLUENE	108-88-3	Flam. Liq. 2; H225  Skin Irrit. 2; H315  Eye Irrit. 2A; H319  Repr. 2; H361  STOT SE 3; H336  STOT RE 2; H373  Asp. Tox. 1; H304	55.58
N-HEXANE	110-54-3	Flam. Liq. 2; H225  Skin Irrit. 2; H315  Repr. 2; H361  STOT SE 3; H336  STOT RE 1; H372	16.17

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		Asp. Tox. 1; H304	
XYLENE	1330-20-7	Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 STOT SE 3; H335, H336 Asp. Tox. 1; H304	5.02
SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL	64741-88-4	Not a hazardous substance or mixture.	1.97
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	64742-89-8	Flam. Liq. 2; H225 STOT SE 3; H336 Asp. Tox. 1; H304	1.68
METHYL-3-PENTANE	96-14-0	Flam. Liq. 2; H225 Eye Irrit. 2A; H319 STOT SE 3; H336 Asp. Tox. 1; H304	1.68
METHYLCYCLOPENTANE	96-37-7	Flam. Liq. 2; H225 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 STOT SE 3; H335, H336 Asp. Tox. 1; H304	1.68

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ETHYL BENZENE	100-41-4	Flam. Liq. 2; H225 Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 STOT RE 2; H373 Asp. Tox. 1; H304	1.54
CARBON BLACK	1333-86-4	Carc. 2; H351	0.39

#### SECTION 4. FIRST AID MEASURES

General advice	: Move out of dangerous area. Call a POISON CENTRE or doctor/physician if exposed or you feel unwell. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled	: Move to fresh air. Keep patient warm and at rest. If unconscious place in recovery position and seek medical advice. Consult a physician after significant exposure.
In case of skin contact	: Remove contaminated clothing. If irritation develops, get medical attention. If on skin, rinse well with water. Wash contaminated clothing before re-use. If on clothes, remove clothes.
In case of eye contact	: Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye.
If swallowed	: Obtain medical attention. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

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Most important symptoms and effects, both acute and delayed

: Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:  
 redness of the skin  
 stomach or intestinal upset (nausea, vomiting, diarrhea)  
 irritation (nose, throat, airways)  
 discomfort in the chest  
 temporary changes in mood and behavior  
 effects on memory  
 Shortness of breath  
 confusion  
 irregular heartbeat  
 Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material.

Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

Causes skin irritation.

Causes serious eye irritation.

May cause drowsiness or dizziness.

Suspected of causing cancer if inhaled.

Suspected of damaging fertility or the unborn child.

Causes damage to organs through prolonged or repeated exposure if inhaled.

May cause damage to organs through prolonged or repeated exposure.

Notes to physician

: No hazards which require special first aid measures.

## SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media

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

Water spray

Foam

Alcohol-resistant foam

Carbon dioxide (CO2)

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Dry chemical

Unsuitable extinguishing media	: High volume water jet
Specific hazards during firefighting	: Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	: carbon dioxide and carbon monoxide Hydrocarbons toxic monomer fumes Aldehydes Bromine organic compounds
Specific extinguishing methods	:
	Product is compatible with standard fire-fighting agents.
Further information	: Do not use a solid water stream as it may scatter and spread fire. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Use a water spray to cool fully closed containers.
Special protective equipment for firefighters	: In the event of fire, wear self-contained breathing apparatus.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Evacuate personnel to safe areas. Remove all sources of ignition. Use personal protective equipment. Ensure adequate ventilation. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
Environmental precautions	: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to

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local / national regulations (see section 13).

Other information : Comply with all applicable federal, state, and local regulations.

## SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Open drum carefully as content may be under pressure.  
 Avoid formation of aerosol.  
 Provide sufficient air exchange and/or exhaust in work rooms.  
 Do not breathe vapours/dust.  
 Do not smoke.  
 Container hazardous when empty.  
 Take precautionary measures against static discharges.  
 Avoid exposure - obtain special instructions before use.  
 Avoid contact with skin and eyes.  
 Smoking, eating and drinking should be prohibited in the application area.  
 For personal protection see section 8.  
 Dispose of rinse water in accordance with local and national regulations.  
 Container may be opened only under exhaust ventilation hood.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.  
 Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
 Observe label precautions.  
 No smoking.  
 Electrical installations / working materials must comply with the technological safety standards.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
TOLUENE	108-88-3	TWA	20 ppm	ACGIH
		REL	100 ppm 375 mg/m3	NIOSH/GUID E
		STEL	150 ppm 560 mg/m3	NIOSH/GUID E
		TWA	200 ppm	OSHA/Z2
		Ceiling	300 ppm	OSHA/Z2
		MAX. CONC	500 ppm	OSHA/Z2
N-HEXANE	110-54-3	TWA	50 ppm	ACGIH
		REL	50 ppm	NIOSH/GUID

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			180 mg/m3	E
		PEL	500 ppm 1,800 mg/m3	OSHA_TRANS
		TWA	50 ppm 180 mg/m3	TN OEL
XYLENE	1330-20-7	TWA	100 ppm	ACGIH
		STEL	150 ppm	ACGIH
		PEL	100 ppm 435 mg/m3	OSHA_TRANS
		REL	100 ppm 435 mg/m3	NIOSH/GUIDE
		STEL	150 ppm 655 mg/m3	NIOSH/GUIDE
SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL	64741-88-4	PEL	500 ppm 2,000 mg/m3	OSHA_TRANS
		REL	5 mg/m3 Mist.	NIOSH/GUIDE
		STEL	10 mg/m3 Mist.	NIOSH/GUIDE
		PEL	5 mg/m3 Mist.	OSHA_TRANS
		TWA	5 mg/m3 Inhalable fraction.	ACGIH
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	64742-89-8	TWA	500 ppm	OSHA_TRANS
		TWA	300 ppm	ACGIH
		TWA	2,000 mg/m3	OSHA_TRANS
		TWA	1,370 mg/m3	ACGIH
METHYL-3-PENTANE	96-14-0	REL	100 ppm 350 mg/m3	NIOSH/GUIDE
		Ceil_Time	510 ppm 1,800 mg/m3	NIOSH/GUIDE
		TWA	500 ppm 1,800 mg/m3	TN OEL
		STEL	1,000 ppm 3,600 mg/m3	TN OEL
		TWA	500 ppm	ACGIH
		STEL	1,000 ppm	ACGIH
		ST ESL	3,500 µg/m3	TX ESL
		ST ESL	1,000 ppb	TX ESL
		AN ESL	350 µg/m3	TX ESL
		AN ESL	100 ppb	TX ESL
		TWA	500 ppm 1,800 mg/m3	Z1A
		STEL	1,000 ppm 3,600 mg/m3	Z1A
		TWA PEL	500 ppm 1,800 mg/m3	US CA OEL



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		STEL	1,000 ppm 3,600 mg/m3	US CA OEL
ETHYL BENZENE	100-41-4	TWA	20 ppm	ACGIH
		REL	100 ppm 435 mg/m3	NIOSH/GUID E
		STEL	125 ppm 545 mg/m3	NIOSH/GUID E
		PEL	100 ppm 435 mg/m3	OSHA_TRA NS
CARBON BLACK	1333-86-4	REL	0.1 mg/m3	NIOSH/GUID E
		REL	3.5 mg/m3	NIOSH/GUID E
		PEL	3.5 mg/m3	OSHA_TRA NS
		TWA	3 mg/m3 Inhalable fraction.	ACGIH
TALC	14807-96-6	TWA	2 mg/m3 Respirable fraction.	ACGIH
		REL	2 mg/m3 Respirable.	NIOSH/GUID E
		TWA	0.1 mg/m3 Respirable.	Z3
		TWA	0.3 mg/m3 Total dust.	Z3

#### Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
TOLUENE	108-88-3	o-Cresol, with hydrolysis	Creatinine in urine	Sampling time: End of shift.	0.3 mg/g	
Remarks:	Background					
		toluene	Urine	Sampling time: End of shift.	0.03 mg/l	
		toluene	Blood	Sampling time: Prior to last shift of work week.	0.02 mg/l	
N-HEXANE	110-54-3	2,5-Hexanedion, without hydrolysis	Urine	Sampling time: End of shift at end of work week.	0.4 mg/l	
XYLENE	1330-20-7	Methylhippuric acids	Creatinine in urine	Sampling time: End of shift.	1.5 g/g	
ETHYL BENZENE	100-41-4	Sum of	Creatinine	Sampling	0.15 g/g	ACGIH

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		mandelic acid and phenylglyoxylic acid	in urine	time: End of shift.		BEI
Remarks:	Nonspecific					

**Engineering measures** : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

**Personal protective equipment**

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

Hand protection  
Remarks

: The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection

: Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.

Skin and body protection

: Wear as appropriate:  
impervious clothing  
Safety shoes  
Flame-resistant clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.  
Discard gloves that show tears, pinholes, or signs of wear.  
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures

: Wash hands before breaks and at the end of workday.  
When using do not eat or drink.  
When using do not smoke.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical state : liquid

Colour : black

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Odour : No data available  
 Odour Threshold : No data available  
 pH : No data available  
 : No data available  
 Boiling point/boiling range : > 147 °F / 64 °C  
 Flash point : < 0 °F / < -18 °C  
 Method: Seta closed cup  
 Evaporation rate : < 1  
 Ethyl Ether  
 Flammability (solid, gas) :  
 No data available  
 Flammability (liquids) : Static Accumulating liquid  
 Flammability (liquids) :  
 Upper explosion limit : 7 %(V)  
 Calculated Explosive Limit  
 Lower explosion limit : 1 %(V)  
 Calculated Explosive Limit  
 Vapour pressure : 184 hPa (20 °C)  
 Calculated Vapor Pressure  
 Relative vapour density : > 1AIR=1  
 Relative density : 0.849 (25 °C)  
 Density : 0.849 g/cm3 (20 °C)  
 Solubility(ies)  
 Water solubility : insoluble  
 Solubility in other solvents : No data available  
 Partition coefficient: n-octanol/water : No data available  
 Thermal decomposition : No data available  
 Viscosity  
 Viscosity, dynamic : ca. 1,800 mPa.s (20 °C)  
 Viscosity, kinematic : No data available

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Oxidizing properties : No data available

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## SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Vapours may form explosive mixture with air.

Conditions to avoid : Heat, flames and sparks.  
excessive heat

Incompatible materials : Acids  
alkalis  
Oxidizing agents  
peroxides

Hazardous decomposition products : Aldehydes  
carbon dioxide and carbon monoxide  
Hydrocarbons  
organic compounds

---

## SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation  
Skin contact  
Eye Contact  
Ingestion

### Acute toxicity

Not classified based on available information.

### Components:

#### TOLUENE:

Acute oral toxicity : LD 50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC 50 (Rat): 8000 ppm  
Exposure time: 4 h

Acute dermal toxicity : LD 50 (Rabbit): 12,124 mg/kg

#### N-HEXANE:

Acute oral toxicity : LD 50 (Rat, male and female): ca. 16 g/kg

Acute inhalation toxicity : LC50 (Rat, male): > 5000 ppm  
Exposure time: 24 h

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Acute dermal toxicity : LD 50 (Rabbit, male and female): > 2,000 mg/kg  
Assessment: No adverse effect has been observed in acute dermal toxicity tests.

**XYLENE:**

Acute oral toxicity : LD 50 (Rat): 3,523 - 8,600 mg/kg

Acute inhalation toxicity : LC 50 (Rat): 6700 ppm  
Exposure time: 4 h  
Test atmosphere: vapour

Assessment: The component/mixture is classified as acute inhalation toxicity, category 4.

Acute dermal toxicity : LD 50 (Rabbit): 1,700 mg/kg

**SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL:**

Acute oral toxicity : LD 50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.58 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: Not classified as acutely toxic by inhalation under GHS.  
Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD 50 (Rabbit): > 5,000 mg/kg  
Remarks: No mortality observed at this dose.

**SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC:**

Acute oral toxicity : LD 50 (Rat): > 8,000 mg/kg

Acute inhalation toxicity : LC 50 (Rat): > 7,630 mg/m3  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: OECD Test Guideline 403  
Assessment: No adverse effect has been observed in acute inhalation toxicity tests.

Acute dermal toxicity : LD 50 (Rat): > 4,000 mg/kg  
Assessment: Not classified as acutely toxic by dermal absorption under GHS.

**METHYL-3-PENTANE:**

Acute oral toxicity : LD50 (Rat): 16,000 mg/kg  
Remarks: Information given is based on data obtained from similar substances.

Acute inhalation toxicity : LC50 (Rat): 73680 ppm  
Exposure time: 4 h  
Test atmosphere: vapour  
Remarks: Information given is based on data obtained from similar substances.

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Acute dermal toxicity : LD50 (Rabbit): 3,350 mg/kg  
 Assessment: No adverse effect has been observed in acute dermal toxicity tests.  
 Remarks: Information given is based on data obtained from similar substances.

**METHYLCYCLOPENTANE:**

Acute oral toxicity : LD 50 (Rat): > 2,000 mg/kg

**ETHYL BENZENE:**

Acute oral toxicity : LD 50 (Rat): ca. 3,500 mg/kg

Acute inhalation toxicity : LC50 (Rat): 4000 ppm  
 Exposure time: 4 h  
 Test atmosphere: vapour

Acute dermal toxicity : LD 50 (Rabbit): 17,800 mg/kg

**CARBON BLACK:**

Acute oral toxicity : LD 50 (Rat): > 10,000 mg/kg

Acute dermal toxicity : LD 50 (Rabbit): > 3 g/kg

**Skin corrosion/irritation**

Causes skin irritation.

**Product:**

Result: Repeated exposure may cause skin dryness or cracking.

Remarks: May cause skin irritation and/or dermatitis.

**Components:**

**TOLUENE:**

Result: Irritating to skin

**N-HEXANE:**

Result: Irritating to skin

**XYLENE:**

Result: Irritating to skin

**SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL:**

Species: Rabbit

Result: Not irritating to skin

**SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC:**

Result: Mildly irritating to skin

Result: Repeated exposure may cause skin dryness or cracking.

**METHYL-3-PENTANE:**

Result: Slightly to moderately irritating to skin

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**METHYLCYCLOPENTANE:**

Result: Irritating to skin

Result: Repeated exposure may cause skin dryness or cracking.

**ETHYL BENZENE:**

Result: Irritating to skin

**CARBON BLACK:**

Result: Not irritating to skin

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Product:**

Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin., Causes serious eye irritation.

**Components:**

**TOLUENE:**

Result: Irritating to eyes

**N-HEXANE:**

Result: Slightly irritating to eyes

**XYLENE:**

Result: Irritating to eyes

**SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL:**

Species: Rabbit

Result: Not irritating to eyes

**SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC:**

Result: Mildly irritating to eyes

**METHYL-3-PENTANE:**

Result: Irritating to eyes

**METHYLCYCLOPENTANE:**

Result: Irritating to eyes

**ETHYL BENZENE:**

Result: Irritating to eyes

Remarks: Exposure to a concentration of 5000 ppm causes intolerable irritation of the eyes

**CARBON BLACK:**

Result: Slightly irritating to eyes

**Respiratory or skin sensitisation**

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

**Components:**

**SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL:**

Test Type: Buehler Test

Species: Guinea pig

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Assessment: Does not cause skin sensitisation.

METHYL-3-PENTANE:

Result: Did not cause sensitisation on laboratory animals.

#### **Germ cell mutagenicity**

Not classified based on available information.

#### **Components:**

METHYLCYCLOPENTANE:

Genotoxicity in vitro : Test Type: Ames test  
Metabolic activation: with and without metabolic activation  
Result: negative

#### **Carcinogenicity**

Suspected of causing cancer if inhaled.

#### **Components:**

CARBON BLACK:

Carcinogenicity - : Limited evidence of carcinogenicity in inhalation studies with  
Assessment animals.

#### **Reproductive toxicity**

Suspected of damaging fertility or the unborn child.

#### **Components:**

TOLUENE:

Reproductive toxicity - : Some evidence of adverse effects on development, based on  
Assessment animal experiments.

N-HEXANE:

Reproductive toxicity - : Suspected of damaging fertility., Some evidence of adverse  
Assessment effects on sexual function and fertility, based on animal  
experiments.

#### **STOT - single exposure**

May cause drowsiness or dizziness.

#### **Components:**

TOLUENE:

Exposure routes: Inhalation

Target Organs: Central nervous system

Assessment: May cause drowsiness or dizziness.

N-HEXANE:

Target Organs: Central nervous system

Assessment: May cause drowsiness or dizziness.

XYLENE:

Assessment: May cause respiratory irritation., May cause drowsiness or dizziness.

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC:

Exposure routes: Inhalation

Target Organs: Central nervous system

Assessment: May cause drowsiness or dizziness.

METHYL-3-PENTANE:

Target Organs: Central nervous system



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Assessment: May cause drowsiness or dizziness.

**METHYLCYCLOPENTANE:**

Target Organs: Respiratory Tract, Central nervous system

Assessment: May cause respiratory irritation., May cause drowsiness or dizziness.

**STOT - repeated exposure**

Causes damage to organs (Nervous system, Neurologic: other (neuropsychological effects, auditory dysfunction and effects on colour vision)) through prolonged or repeated exposure if inhaled.

May cause damage to organs (Auditory system) through prolonged or repeated exposure.

**Components:**

**TOLUENE:**

Exposure routes: Inhalation

Target Organs: Neurologic: other (neuropsychological effects, auditory dysfunction and effects on colour vision)

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

**N-HEXANE:**

Exposure routes: Inhalation

Target Organs: Nervous system

Assessment: Causes damage to organs through prolonged or repeated exposure.

**ETHYL BENZENE:**

Target Organs: Auditory system

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

**Aspiration toxicity**

Not classified based on available information.

**Product:**

No aspiration toxicity classification

**Components:**

**TOLUENE:**

May be fatal if swallowed and enters airways.

**N-HEXANE:**

May be fatal if swallowed and enters airways.

**XYLENE:**

May be fatal if swallowed and enters airways.

**SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL:**

No aspiration toxicity classification

**SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC:**

May be fatal if swallowed and enters airways.

**METHYL-3-PENTANE:**

May be fatal if swallowed and enters airways.

**METHYLCYCLOPENTANE:**

May be fatal if swallowed and enters airways.

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ETHYL BENZENE:  
May be fatal if swallowed and enters airways.

**Further information**

**Product:**

Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting., Concentrations substantially above the TLV value may cause narcotic effects., Solvents may degrease the skin.

**Components:**

ETHYL BENZENE:

Remarks: Central nervous system

**Carcinogenicity:**

**IARC**

Group 2B: Possibly carcinogenic to humans

ETHYL BENZENE 100-41-4

CARBON BLACK 1333-86-4

TALC 14807-96-6

**OSHA**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**NTP**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

---

**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Product:**

Ecotoxicology Assessment

Acute aquatic toxicity : Acute aquatic toxicity Category 2; Toxic to aquatic life.

Chronic aquatic toxicity : Chronic aquatic toxicity Category 3; Harmful to aquatic life with long lasting effects.

**Components:**

TOLUENE:

Toxicity to fish : LC50 (Oncorhynchus kisutch (coho salmon)): 5.5 mg/l  
Exposure time: 96 h  
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (Ceriodaphnia dubia)): 3.78 mg/l  
Exposure time: 48 h  
Remarks: Mortality

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Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (microalgae)): > 433 mg/l  
End point: Growth inhibition  
Exposure time: 96 h

NOEC (Scenedesmus quadricauda (Green algae)): > 400 mg/l  
End point: Growth inhibition  
Exposure time: 7 d

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 1.39 mg/l  
Exposure time: 40 d  
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Water flea (Ceriodaphnia dubia)): 0.74 mg/l  
Exposure time: 7 d

#### N-HEXANE:

Toxicity to algae : EL50 (Pseudokirchneriella subcapitata (green algae)): 9.29 mg/l  
Exposure time: 72 h

Ecotoxicology Assessment  
Acute aquatic toxicity

: Toxic to aquatic life.

Chronic aquatic toxicity

: Toxic to aquatic life with long lasting effects.

#### XYLENE:

Toxicity to fish : LC 50 (Fathead minnow (Pimephales promelas)): 23.53 - 29.97 mg/l  
Exposure time: 96 h  
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : LC 50 (Water flea (Daphnia magna)): > 100 - < 1,000 mg/l  
Exposure time: 24 h  
Test Type: static test

#### SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL:

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l  
Exposure time: 96 h  
Test Type: static test  
Test substance: WAF  
Method: OECD Test Guideline 203  
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l  
Exposure time: 48 h  
Test Type: static test  
Test substance: WAF  
Method: OECD Test Guideline 202

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Toxicity to algae : NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l  
End point: Growth inhibition  
Exposure time: 72 h  
Test Type: static test  
Test substance: WAF  
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOELR (Oncorhynchus mykiss (rainbow trout)): Calculated >= 1,000 mg/l  
Exposure time: 14 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEL (Daphnia (water flea)): 10 mg/l  
Exposure time: 21 d  
Test substance: WAF  
Method: OECD Test Guideline 211

METHYL-3-PENTANE:  
Ecotoxicology Assessment  
Acute aquatic toxicity

: Toxic to aquatic life.

Chronic aquatic toxicity

: Toxic to aquatic life with long lasting effects.

ETHYL BENZENE:

Toxicity to fish

: LC 50 (Fathead minnow (Pimephales promelas)): 9.1 - 15.6 mg/l  
Exposure time: 96 h  
Test Type: static test

LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss)): 4.2 mg/l  
Exposure time: 96 h  
Test Type: Renewal

Toxicity to daphnia and other aquatic invertebrates : EC 50 (Water flea (Daphnia magna)): 1.37 - 4.4 mg/l  
Exposure time: 48 h  
Test Type: static test

Toxicity to algae : (Pseudokirchneriella subcapitata (green algae)): 3.6 mg/l  
End point: EC 50  
Exposure time: 96 h  
Test Type: Growth inhibition

#### Persistence and degradability

##### Components:

TOLUENE:

Biodegradability : Result: Readily biodegradable

N-HEXANE:

Biodegradability : Remarks: Expected to be biodegradable

XYLENE:

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Physico-chemical : Remarks: The product evaporates readily.  
removability

**SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 2 - 4 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

**ETHYL BENZENE:**

Biodegradability : Result: Readily biodegradable  
Biodegradation: 70 - 80 %  
Exposure time: 28 d

**Bioaccumulative potential**

**Components:**

**TOLUENE:**

Bioaccumulation : Species: Ide, silver or golden orfe (Leuciscus idus)  
Bioconcentration factor (BCF): 94  
Exposure time: 3 d  
Concentration: 0.05 mg/l  
Method: Not reported

Partition coefficient: n- : log Pow: 2.73  
octanol/water

**N-HEXANE:**

Partition coefficient: n- : log Pow: 3.90  
octanol/water

**XYLENE:**

Partition coefficient: n- : log Pow: 3.16  
octanol/water

**METHYL-3-PENTANE:**

Partition coefficient: n- : log Pow: 3.60  
octanol/water

**METHYLCYCLOPENTANE:**

Partition coefficient: n- : log Pow: 3.37  
octanol/water

**ETHYL BENZENE:**

Partition coefficient: n- : log Pow: 3.15  
octanol/water

**Mobility in soil**

**Components:**

No data available

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#### Other adverse effects

No data available

#### Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life., Harmful to aquatic life with long lasting effects.

#### Components:

### SECTION 13. DISPOSAL CONSIDERATIONS

#### Disposal methods

General advice : The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.

Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.  
Do not re-use empty containers.  
Do not burn, or use a cutting torch on, the empty drum.

### SECTION 14. TRANSPORT INFORMATION

#### International transport regulations

##### REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.
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#### MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

UN	1133	Adhesives	3	II	LIMITED QUANTITY
----	------	-----------	---	----	------------------

#### INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN	1133	Adhesives	3	II	LIMITED QUANTITY
----	------	-----------	---	----	------------------

#### INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN	1133	Adhesives	3	II	LIMITED QUANTITY
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#### INTERNATIONAL MARITIME DANGEROUS GOODS

UN	1133	ADHESIVES	3	II	LIMITED QUANTITY

#### TRANSPORT CANADA - INLAND WATERWAYS

UN	1133	ADHESIVES	3	II	LIMITED QUANTITY

#### TRANSPORT CANADA - RAIL

UN	1133	ADHESIVES	3	II	LIMITED QUANTITY

#### TRANSPORT CANADA - ROAD

UN	1133	ADHESIVES	3	II	MARINE POLLUTANT:( NORMAL- HEXANE)LIMI TED QUANTITY

#### U.S. DOT - INLAND WATERWAYS

UN	1133	Adhesives	3	II	

#### U.S. DOT - RAIL

UN	1133	Adhesives	3	II	

#### U.S. DOT - ROAD

UN	1133	ADHESIVOS	3	II	

\*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Marine pollutant	no
------------------	----

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

#### SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

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Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
TOLUENE	108-88-3	1000	1798.900872

**SARA 311/312 Hazards** : Chronic Health Hazard  
Acute Health Hazard  
Fire Hazard

**SARA 313 Component(s)**

TOLUENE	108-88-3	55.58 %
N-HEXANE	110-54-3	16.17 %
XYLENE	1330-20-7	5.02 %
ETHYL BENZENE	100-41-4	1.54 %

**California Prop 65**

WARNING! This product contains a chemical known to the State of California to cause cancer.

ETHYL BENZENE	100-41-4
CARBON BLACK	1333-86-4
BENZENE	71-43-2
NAPHTHALENE	91-20-3

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

TOLUENE	108-88-3
BENZENE	71-43-2

**The components of this product are reported in the following inventories:**

TSCA : On TSCA Inventory

DSL : This product contains one or several components that are not on the Canadian DSL and have annual quantity limits.

AICS : Not in compliance with the inventory

ENCS : Not in compliance with the inventory

KECI : Not in compliance with the inventory

PICCS : Not in compliance with the inventory

IECSC : Not in compliance with the inventory

**Inventories**



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AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

## SECTION 16. OTHER INFORMATION

### Further information

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NFPA:	HMIS III:						
<p>Flammability</p> <p>Health</p> <p>Instability</p> <p>Special hazard.</p>	<table> <tr> <td>HEALTH</td><td>2*</td></tr> <tr> <td>FLAMMABILITY</td><td>3</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> <p>0 = not significant, 1 =Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p>	HEALTH	2*	FLAMMABILITY	3	PHYSICAL HAZARD	0
HEALTH	2*						
FLAMMABILITY	3						
PHYSICAL HAZARD	0						

### NFPA Flammable and Combustible Liquids Classification

Flammable Liquid Class IB

Full text of H-Statements referred to under sections 2 and 3.

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H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
H303	May be harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H316	Causes mild skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H333	May be harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer if inhaled.
H361	Suspected of damaging fertility or the unborn child.
H361d	Suspected of damaging the unborn child.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs through prolonged or repeated exposure if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure if inhaled.
H401	Toxic to aquatic life.
H402	Harmful to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

#### Further information

Sources of key data used to compile the Safety Data Sheet

Ashland internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

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ISO : International Organization for Standardization  
 logPow : octanol-water partition coefficient  
 LCxx : Lethal Concentration, for xx percent of test population  
 LDxx : Lethal Dose, for xx percent of test population.  
 ICxx : Inhibitory Concentration for xx of a substance  
 Ecxx : Effective Concentration of xx  
 N.O.S.: Not Otherwise Specified  
 OECD : Organization for Economic Co-operation and Development  
 OEL : Occupational Exposure Limit  
 P-Statement : Precautionary Statement  
 PBT : Persistent , Bioaccumulative and Toxic  
 PPE : Personal Protective Equipment  
 STEL : Short-term exposure limit  
 STOT : Specific Target Organ Toxicity  
 TLV : Threshold Limit Value  
 TWA : Time-weighted average  
 vPvB : Very Persistent and Very Bioaccumulative  
 WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act  
 DOT : Department of Transportation  
 FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act  
 HMIRC : Hazardous Materials Information Review Commission  
 HMIS : Hazardous Materials Identification System  
 NFPA : National Fire Protection Association  
 NIOSH : National Institute for Occupational Safety and Health  
 OSHA : Occupational Safety and Health Administration  
 PMRA : Health Canada Pest Management Regulatory Agency  
 RTK : Right to Know  
 WHMIS : Workplace Hazardous Materials Information System



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systemic toxicity - repeated exposure (Inhalation)

auditory dysfunction and effects on colour vision))

#### GHS Label element

Hazard pictograms



Signal Word

: Danger

Hazard Statements

: Highly flammable liquid and vapor.  
Causes skin irritation.  
Causes serious eye irritation.  
May cause drowsiness or dizziness.  
Suspected of causing cancer if inhaled.  
Suspected of damaging fertility or the unborn child.  
Causes damage to organs (Nervous system, Neurologic: other (neuropsychological effects, auditory dysfunction and effects on colour vision)) through prolonged or repeated exposure if inhaled.  
May cause damage to organs (Auditory system) through prolonged or repeated exposure.

Precautionary Statements

: **Prevention:**  
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.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.  
Wash skin thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**Response:**  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician 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 exposed or concerned: Get medical advice/ attention.  
If skin irritation occurs: Get medical advice/ attention.  
If eye irritation persists: Get medical advice/ attention.

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Take off contaminated clothing and wash before reuse.  
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

**Storage:**

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

**Disposal:**

Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

Static Accumulating liquid

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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

Chemical nature : Static Accumulator

Chemical nature : Defatter

**Hazardous components**

Chemical Name	CAS-No.	Classification	Concentration (%)
TOLUENE	108-88-3	Flam. Liq. 2; H225  Skin Irrit. 2; H315  Eye Irrit. 2A; H319  Repr. 2; H361  STOT SE 3; H336  STOT RE 2; H373  Asp. Tox. 1; H304	55.58
N-HEXANE	110-54-3	Flam. Liq. 2; H225  Skin Irrit. 2; H315  Repr. 2; H361  STOT SE 3; H336  STOT RE 1; H372	16.17

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		Asp. Tox. 1; H304	
XYLENE	1330-20-7	Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 STOT SE 3; H335, H336 Asp. Tox. 1; H304	5.02
SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL	64741-88-4	Not a hazardous substance or mixture.	1.97
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	64742-89-8	Flam. Liq. 2; H225 STOT SE 3; H336 Asp. Tox. 1; H304	1.68
METHYL-3-PENTANE	96-14-0	Flam. Liq. 2; H225 Eye Irrit. 2A; H319 STOT SE 3; H336 Asp. Tox. 1; H304	1.68
METHYLCYCLOPENTANE	96-37-7	Flam. Liq. 2; H225 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 STOT SE 3; H335, H336 Asp. Tox. 1; H304	1.68

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ETHYL BENZENE	100-41-4	Flam. Liq. 2; H225 Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 STOT RE 2; H373 Asp. Tox. 1; H304	1.54
CARBON BLACK	1333-86-4	Carc. 2; H351	0.39

#### SECTION 4. FIRST AID MEASURES

General advice	: Move out of dangerous area. Call a POISON CENTRE or doctor/physician if exposed or you feel unwell. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled	: Move to fresh air. Keep patient warm and at rest. If unconscious place in recovery position and seek medical advice. Consult a physician after significant exposure.
In case of skin contact	: Remove contaminated clothing. If irritation develops, get medical attention. If on skin, rinse well with water. Wash contaminated clothing before re-use. If on clothes, remove clothes.
In case of eye contact	: Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye.
If swallowed	: Obtain medical attention. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.



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Most important symptoms and effects, both acute and delayed

: Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:  
 redness of the skin  
 stomach or intestinal upset (nausea, vomiting, diarrhea)  
 irritation (nose, throat, airways)  
 discomfort in the chest  
 temporary changes in mood and behavior  
 effects on memory  
 Shortness of breath  
 confusion  
 irregular heartbeat  
 Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material.

Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

Causes skin irritation.

Causes serious eye irritation.

May cause drowsiness or dizziness.

Suspected of causing cancer if inhaled.

Suspected of damaging fertility or the unborn child.

Causes damage to organs through prolonged or repeated exposure if inhaled.

May cause damage to organs through prolonged or repeated exposure.

Notes to physician

: No hazards which require special first aid measures.

## SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media

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

Water spray

Foam

Alcohol-resistant foam

Carbon dioxide (CO2)

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Dry chemical

Unsuitable extinguishing media	: High volume water jet
Specific hazards during firefighting	: Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	: carbon dioxide and carbon monoxide Hydrocarbons toxic monomer fumes Aldehydes Bromine organic compounds
Specific extinguishing methods	:
	Product is compatible with standard fire-fighting agents.
Further information	: Do not use a solid water stream as it may scatter and spread fire. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Use a water spray to cool fully closed containers.
Special protective equipment for firefighters	: In the event of fire, wear self-contained breathing apparatus.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Evacuate personnel to safe areas. Remove all sources of ignition. Use personal protective equipment. Ensure adequate ventilation. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
Environmental precautions	: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to

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local / national regulations (see section 13).

Other information : Comply with all applicable federal, state, and local regulations.

## SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Open drum carefully as content may be under pressure.  
 Avoid formation of aerosol.  
 Provide sufficient air exchange and/or exhaust in work rooms.  
 Do not breathe vapours/dust.  
 Do not smoke.  
 Container hazardous when empty.  
 Take precautionary measures against static discharges.  
 Avoid exposure - obtain special instructions before use.  
 Avoid contact with skin and eyes.  
 Smoking, eating and drinking should be prohibited in the application area.  
 For personal protection see section 8.  
 Dispose of rinse water in accordance with local and national regulations.  
 Container may be opened only under exhaust ventilation hood.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.  
 Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
 Observe label precautions.  
 No smoking.  
 Electrical installations / working materials must comply with the technological safety standards.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
TOLUENE	108-88-3	TWA	20 ppm	ACGIH
		REL	100 ppm 375 mg/m3	NIOSH/GUID E
		STEL	150 ppm 560 mg/m3	NIOSH/GUID E
		TWA	200 ppm	OSHA/Z2
		Ceiling	300 ppm	OSHA/Z2
		MAX. CONC	500 ppm	OSHA/Z2
N-HEXANE	110-54-3	TWA	50 ppm	ACGIH
		REL	50 ppm	NIOSH/GUID

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			180 mg/m3	E
		PEL	500 ppm 1,800 mg/m3	OSHA_TRANS
		TWA	50 ppm 180 mg/m3	TN OEL
XYLENE	1330-20-7	TWA	100 ppm	ACGIH
		STEL	150 ppm	ACGIH
		PEL	100 ppm 435 mg/m3	OSHA_TRANS
		REL	100 ppm 435 mg/m3	NIOSH/GUIDE
		STEL	150 ppm 655 mg/m3	NIOSH/GUIDE
SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL	64741-88-4	PEL	500 ppm 2,000 mg/m3	OSHA_TRANS
		REL	5 mg/m3 Mist.	NIOSH/GUIDE
		STEL	10 mg/m3 Mist.	NIOSH/GUIDE
		PEL	5 mg/m3 Mist.	OSHA_TRANS
		TWA	5 mg/m3 Inhalable fraction.	ACGIH
SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	64742-89-8	TWA	500 ppm	OSHA_TRANS
		TWA	300 ppm	ACGIH
		TWA	2,000 mg/m3	OSHA_TRANS
		TWA	1,370 mg/m3	ACGIH
METHYL-3-PENTANE	96-14-0	REL	100 ppm 350 mg/m3	NIOSH/GUIDE
		Ceil_Time	510 ppm 1,800 mg/m3	NIOSH/GUIDE
		TWA	500 ppm 1,800 mg/m3	TN OEL
		STEL	1,000 ppm 3,600 mg/m3	TN OEL
		TWA	500 ppm	ACGIH
		STEL	1,000 ppm	ACGIH
		ST ESL	3,500 µg/m3	TX ESL
		ST ESL	1,000 ppb	TX ESL
		AN ESL	350 µg/m3	TX ESL
		AN ESL	100 ppb	TX ESL
		TWA	500 ppm 1,800 mg/m3	Z1A
		STEL	1,000 ppm 3,600 mg/m3	Z1A
		TWA PEL	500 ppm 1,800 mg/m3	US CA OEL

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		STEL	1,000 ppm 3,600 mg/m3	US CA OEL
ETHYL BENZENE	100-41-4	TWA	20 ppm	ACGIH
		REL	100 ppm 435 mg/m3	NIOSH/GUID E
		STEL	125 ppm 545 mg/m3	NIOSH/GUID E
		PEL	100 ppm 435 mg/m3	OSHA_TRA NS
CARBON BLACK	1333-86-4	REL	0.1 mg/m3	NIOSH/GUID E
		REL	3.5 mg/m3	NIOSH/GUID E
		PEL	3.5 mg/m3	OSHA_TRA NS
		TWA	3 mg/m3 Inhalable fraction.	ACGIH
TALC	14807-96-6	TWA	2 mg/m3 Respirable fraction.	ACGIH
		REL	2 mg/m3 Respirable.	NIOSH/GUID E
		TWA	0.1 mg/m3 Respirable.	Z3
		TWA	0.3 mg/m3 Total dust.	Z3

#### Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
TOLUENE	108-88-3	o-Cresol, with hydrolysis	Creatinine in urine	Sampling time: End of shift.	0.3 mg/g	
Remarks:	Background					
		toluene	Urine	Sampling time: End of shift.	0.03 mg/l	
		toluene	Blood	Sampling time: Prior to last shift of work week.	0.02 mg/l	
N-HEXANE	110-54-3	2,5-Hexanedion, without hydrolysis	Urine	Sampling time: End of shift at end of work week.	0.4 mg/l	
XYLENE	1330-20-7	Methylhippuric acids	Creatinine in urine	Sampling time: End of shift.	1.5 g/g	
ETHYL BENZENE	100-41-4	Sum of	Creatinine	Sampling	0.15 g/g	ACGIH

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		mandelic acid and phenylglyoxylic acid	in urine	time: End of shift.		BEI
Remarks:	Nonspecific					

**Engineering measures** : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

**Personal protective equipment**

**Respiratory protection** : In the case of vapour formation use a respirator with an approved filter.

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

**Hand protection**  
Remarks

: The suitability for a specific workplace should be discussed with the producers of the protective gloves.

**Eye protection**

: Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.

**Skin and body protection**

: Wear as appropriate:  
impervious clothing  
Safety shoes  
Flame-resistant clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.  
Discard gloves that show tears, pinholes, or signs of wear.  
Wear resistant gloves (consult your safety equipment supplier).

**Hygiene measures**

: Wash hands before breaks and at the end of workday.  
When using do not eat or drink.  
When using do not smoke.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Physical state** : liquid

**Colour** : black

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Odour : No data available  
 Odour Threshold : No data available  
 pH : No data available  
 : No data available  
 Boiling point/boiling range : > 147 °F / 64 °C  
 Flash point : < 0 °F / < -18 °C  
 Method: Seta closed cup  
 Evaporation rate : < 1  
 Ethyl Ether  
 Flammability (solid, gas) :  
 No data available  
 Flammability (liquids) : Static Accumulating liquid  
 Flammability (liquids) :  
 Upper explosion limit : 7 %(V)  
 Calculated Explosive Limit  
 Lower explosion limit : 1 %(V)  
 Calculated Explosive Limit  
 Vapour pressure : 184 hPa (20 °C)  
 Calculated Vapor Pressure  
 Relative vapour density : > 1AIR=1  
 Relative density : 0.849 (25 °C)  
 Density : 0.849 g/cm3 (20 °C)  
 Solubility(ies)  
 Water solubility : insoluble  
 Solubility in other solvents : No data available  
 Partition coefficient: n-octanol/water : No data available  
 Thermal decomposition : No data available  
 Viscosity  
 Viscosity, dynamic : ca. 1,800 mPa.s (20 °C)  
 Viscosity, kinematic : No data available

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Oxidizing properties : No data available

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## SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Vapours may form explosive mixture with air.

Conditions to avoid : Heat, flames and sparks.  
excessive heat

Incompatible materials : Acids  
alkalis  
Oxidizing agents  
peroxides

Hazardous decomposition products : Aldehydes  
carbon dioxide and carbon monoxide  
Hydrocarbons  
organic compounds

---

## SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation  
Skin contact  
Eye Contact  
Ingestion

### Acute toxicity

Not classified based on available information.

### Components:

#### TOLUENE:

Acute oral toxicity : LD 50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC 50 (Rat): 8000 ppm  
Exposure time: 4 h

Acute dermal toxicity : LD 50 (Rabbit): 12,124 mg/kg

#### N-HEXANE:

Acute oral toxicity : LD 50 (Rat, male and female): ca. 16 g/kg

Acute inhalation toxicity : LC50 (Rat, male): > 5000 ppm  
Exposure time: 24 h



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Acute dermal toxicity : LD 50 (Rabbit, male and female): > 2,000 mg/kg  
Assessment: No adverse effect has been observed in acute dermal toxicity tests.

**XYLENE:**

Acute oral toxicity : LD 50 (Rat): 3,523 - 8,600 mg/kg

Acute inhalation toxicity : LC 50 (Rat): 6700 ppm  
Exposure time: 4 h  
Test atmosphere: vapour

Assessment: The component/mixture is classified as acute inhalation toxicity, category 4.

Acute dermal toxicity : LD 50 (Rabbit): 1,700 mg/kg

**SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL:**

Acute oral toxicity : LD 50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.58 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: Not classified as acutely toxic by inhalation under GHS.  
Remarks: No mortality observed at this dose.

Acute dermal toxicity : LD 50 (Rabbit): > 5,000 mg/kg  
Remarks: No mortality observed at this dose.

**SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC:**

Acute oral toxicity : LD 50 (Rat): > 8,000 mg/kg

Acute inhalation toxicity : LC 50 (Rat): > 7,630 mg/m3  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: OECD Test Guideline 403  
Assessment: No adverse effect has been observed in acute inhalation toxicity tests.

Acute dermal toxicity : LD 50 (Rat): > 4,000 mg/kg  
Assessment: Not classified as acutely toxic by dermal absorption under GHS.

**METHYL-3-PENTANE:**

Acute oral toxicity : LD50 (Rat): 16,000 mg/kg  
Remarks: Information given is based on data obtained from similar substances.

Acute inhalation toxicity : LC50 (Rat): 73680 ppm  
Exposure time: 4 h  
Test atmosphere: vapour  
Remarks: Information given is based on data obtained from similar substances.

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Acute dermal toxicity : LD50 (Rabbit): 3,350 mg/kg  
 Assessment: No adverse effect has been observed in acute dermal toxicity tests.  
 Remarks: Information given is based on data obtained from similar substances.

**METHYLCYCLOPENTANE:**

Acute oral toxicity : LD 50 (Rat): > 2,000 mg/kg

**ETHYL BENZENE:**

Acute oral toxicity : LD 50 (Rat): ca. 3,500 mg/kg

Acute inhalation toxicity : LC50 (Rat): 4000 ppm  
 Exposure time: 4 h  
 Test atmosphere: vapour

Acute dermal toxicity : LD 50 (Rabbit): 17,800 mg/kg

**CARBON BLACK:**

Acute oral toxicity : LD 50 (Rat): > 10,000 mg/kg

Acute dermal toxicity : LD 50 (Rabbit): > 3 g/kg

**Skin corrosion/irritation**

Causes skin irritation.

**Product:**

Result: Repeated exposure may cause skin dryness or cracking.

Remarks: May cause skin irritation and/or dermatitis.

**Components:**

**TOLUENE:**

Result: Irritating to skin

**N-HEXANE:**

Result: Irritating to skin

**XYLENE:**

Result: Irritating to skin

**SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL:**

Species: Rabbit

Result: Not irritating to skin

**SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC:**

Result: Mildly irritating to skin

Result: Repeated exposure may cause skin dryness or cracking.

**METHYL-3-PENTANE:**

Result: Slightly to moderately irritating to skin

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**METHYLCYCLOPENTANE:**

Result: Irritating to skin

Result: Repeated exposure may cause skin dryness or cracking.

**ETHYL BENZENE:**

Result: Irritating to skin

**CARBON BLACK:**

Result: Not irritating to skin

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Product:**

Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin., Causes serious eye irritation.

**Components:**

**TOLUENE:**

Result: Irritating to eyes

**N-HEXANE:**

Result: Slightly irritating to eyes

**XYLENE:**

Result: Irritating to eyes

**SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL:**

Species: Rabbit

Result: Not irritating to eyes

**SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC:**

Result: Mildly irritating to eyes

**METHYL-3-PENTANE:**

Result: Irritating to eyes

**METHYLCYCLOPENTANE:**

Result: Irritating to eyes

**ETHYL BENZENE:**

Result: Irritating to eyes

Remarks: Exposure to a concentration of 5000 ppm causes intolerable irritation of the eyes

**CARBON BLACK:**

Result: Slightly irritating to eyes

**Respiratory or skin sensitisation**

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

**Components:**

**SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL:**

Test Type: Buehler Test

Species: Guinea pig

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Assessment: Does not cause skin sensitisation.

METHYL-3-PENTANE:

Result: Did not cause sensitisation on laboratory animals.

#### **Germ cell mutagenicity**

Not classified based on available information.

#### **Components:**

METHYLCYCLOPENTANE:

Genotoxicity in vitro : Test Type: Ames test  
Metabolic activation: with and without metabolic activation  
Result: negative

#### **Carcinogenicity**

Suspected of causing cancer if inhaled.

#### **Components:**

CARBON BLACK:

Carcinogenicity - : Limited evidence of carcinogenicity in inhalation studies with  
Assessment animals.

#### **Reproductive toxicity**

Suspected of damaging fertility or the unborn child.

#### **Components:**

TOLUENE:

Reproductive toxicity - : Some evidence of adverse effects on development, based on  
Assessment animal experiments.

N-HEXANE:

Reproductive toxicity - : Suspected of damaging fertility., Some evidence of adverse  
Assessment effects on sexual function and fertility, based on animal  
experiments.

#### **STOT - single exposure**

May cause drowsiness or dizziness.

#### **Components:**

TOLUENE:

Exposure routes: Inhalation

Target Organs: Central nervous system

Assessment: May cause drowsiness or dizziness.

N-HEXANE:

Target Organs: Central nervous system

Assessment: May cause drowsiness or dizziness.

XYLENE:

Assessment: May cause respiratory irritation., May cause drowsiness or dizziness.

SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC:

Exposure routes: Inhalation

Target Organs: Central nervous system

Assessment: May cause drowsiness or dizziness.

METHYL-3-PENTANE:

Target Organs: Central nervous system

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Assessment: May cause drowsiness or dizziness.

**METHYLCYCLOPENTANE:**

Target Organs: Respiratory Tract, Central nervous system

Assessment: May cause respiratory irritation., May cause drowsiness or dizziness.

**STOT - repeated exposure**

Causes damage to organs (Nervous system, Neurologic: other (neuropsychological effects, auditory dysfunction and effects on colour vision)) through prolonged or repeated exposure if inhaled.

May cause damage to organs (Auditory system) through prolonged or repeated exposure.

**Components:**

**TOLUENE:**

Exposure routes: Inhalation

Target Organs: Neurologic: other (neuropsychological effects, auditory dysfunction and effects on colour vision)

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

**N-HEXANE:**

Exposure routes: Inhalation

Target Organs: Nervous system

Assessment: Causes damage to organs through prolonged or repeated exposure.

**ETHYL BENZENE:**

Target Organs: Auditory system

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

**Aspiration toxicity**

Not classified based on available information.

**Product:**

No aspiration toxicity classification

**Components:**

**TOLUENE:**

May be fatal if swallowed and enters airways.

**N-HEXANE:**

May be fatal if swallowed and enters airways.

**XYLENE:**

May be fatal if swallowed and enters airways.

**SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL:**

No aspiration toxicity classification

**SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC:**

May be fatal if swallowed and enters airways.

**METHYL-3-PENTANE:**

May be fatal if swallowed and enters airways.

**METHYLCYCLOPENTANE:**

May be fatal if swallowed and enters airways.

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ETHYL BENZENE:  
May be fatal if swallowed and enters airways.

**Further information**

**Product:**

Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting., Concentrations substantially above the TLV value may cause narcotic effects., Solvents may degrease the skin.

**Components:**

ETHYL BENZENE:

Remarks: Central nervous system

**Carcinogenicity:**

**IARC**

Group 2B: Possibly carcinogenic to humans

ETHYL BENZENE 100-41-4

CARBON BLACK 1333-86-4

TALC 14807-96-6

**OSHA**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**NTP**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

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**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Product:**

Ecotoxicology Assessment

Acute aquatic toxicity : Acute aquatic toxicity Category 2; Toxic to aquatic life.

Chronic aquatic toxicity : Chronic aquatic toxicity Category 3; Harmful to aquatic life with long lasting effects.

**Components:**

TOLUENE:

Toxicity to fish : LC50 (Oncorhynchus kisutch (coho salmon)): 5.5 mg/l  
Exposure time: 96 h  
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (Ceriodaphnia dubia)): 3.78 mg/l  
Exposure time: 48 h  
Remarks: Mortality

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Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (microalgae)): > 433 mg/l  
End point: Growth inhibition  
Exposure time: 96 h

NOEC (Scenedesmus quadricauda (Green algae)): > 400 mg/l  
End point: Growth inhibition  
Exposure time: 7 d

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 1.39 mg/l  
Exposure time: 40 d  
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Water flea (Ceriodaphnia dubia)): 0.74 mg/l  
Exposure time: 7 d

#### N-HEXANE:

Toxicity to algae : EL50 (Pseudokirchneriella subcapitata (green algae)): 9.29 mg/l  
Exposure time: 72 h

#### Ecotoxicology Assessment Acute aquatic toxicity

: Toxic to aquatic life.

#### Chronic aquatic toxicity

: Toxic to aquatic life with long lasting effects.

#### XYLENE:

Toxicity to fish : LC 50 (Fathead minnow (Pimephales promelas)): 23.53 - 29.97 mg/l  
Exposure time: 96 h  
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : LC 50 (Water flea (Daphnia magna)): > 100 - < 1,000 mg/l  
Exposure time: 24 h  
Test Type: static test

#### SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL:

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l  
Exposure time: 96 h  
Test Type: static test  
Test substance: WAF  
Method: OECD Test Guideline 203  
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l  
Exposure time: 48 h  
Test Type: static test  
Test substance: WAF  
Method: OECD Test Guideline 202

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Toxicity to algae : NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l  
End point: Growth inhibition  
Exposure time: 72 h  
Test Type: static test  
Test substance: WAF  
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOELR (Oncorhynchus mykiss (rainbow trout)): Calculated >= 1,000 mg/l  
Exposure time: 14 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEL (Daphnia (water flea)): 10 mg/l  
Exposure time: 21 d  
Test substance: WAF  
Method: OECD Test Guideline 211

**METHYL-3-PENTANE:**  
Ecotoxicology Assessment  
Acute aquatic toxicity : Toxic to aquatic life.

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

**ETHYL BENZENE:**  
Toxicity to fish : LC 50 (Fathead minnow (Pimephales promelas)): 9.1 - 15.6 mg/l  
Exposure time: 96 h  
Test Type: static test

LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss)): 4.2 mg/l  
Exposure time: 96 h  
Test Type: Renewal

Toxicity to daphnia and other aquatic invertebrates : EC 50 (Water flea (Daphnia magna)): 1.37 - 4.4 mg/l  
Exposure time: 48 h  
Test Type: static test

Toxicity to algae : (Pseudokirchneriella subcapitata (green algae)): 3.6 mg/l  
End point: EC 50  
Exposure time: 96 h  
Test Type: Growth inhibition

#### **Persistence and degradability**

##### **Components:**

##### **TOLUENE:**

Biodegradability : Result: Readily biodegradable

##### **N-HEXANE:**

Biodegradability : Remarks: Expected to be biodegradable

##### **XYLENE:**



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Physico-chemical : Remarks: The product evaporates readily.  
removability

**SEVERELY SOLVENT REFINED HEAVY PARAFFINIC PETROLEUM OIL:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 2 - 4 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

**ETHYL BENZENE:**

Biodegradability : Result: Readily biodegradable  
Biodegradation: 70 - 80 %  
Exposure time: 28 d

**Bioaccumulative potential**

**Components:**

**TOLUENE:**

Bioaccumulation : Species: Ide, silver or golden orfe (Leuciscus idus)  
Bioconcentration factor (BCF): 94  
Exposure time: 3 d  
Concentration: 0.05 mg/l  
Method: Not reported

Partition coefficient: n- : log Pow: 2.73  
octanol/water

**N-HEXANE:**

Partition coefficient: n- : log Pow: 3.90  
octanol/water

**XYLENE:**

Partition coefficient: n- : log Pow: 3.16  
octanol/water

**METHYL-3-PENTANE:**

Partition coefficient: n- : log Pow: 3.60  
octanol/water

**METHYLCYCLOPENTANE:**

Partition coefficient: n- : log Pow: 3.37  
octanol/water

**ETHYL BENZENE:**

Partition coefficient: n- : log Pow: 3.15  
octanol/water

**Mobility in soil**

**Components:**

No data available

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#### Other adverse effects

No data available

#### Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life., Harmful to aquatic life with long lasting effects.

#### Components:

### SECTION 13. DISPOSAL CONSIDERATIONS

#### Disposal methods

General advice : The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.

Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.  
Do not re-use empty containers.  
Do not burn, or use a cutting torch on, the empty drum.

### SECTION 14. TRANSPORT INFORMATION

#### International transport regulations

##### REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.
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#### MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

UN	1133	Adhesives	3	II	LIMITED QUANTITY
----	------	-----------	---	----	------------------

#### INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN	1133	Adhesives	3	II	LIMITED QUANTITY
----	------	-----------	---	----	------------------

#### INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN	1133	Adhesives	3	II	LIMITED QUANTITY
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#### INTERNATIONAL MARITIME DANGEROUS GOODS

UN	1133	ADHESIVES	3	II	LIMITED QUANTITY

#### TRANSPORT CANADA - INLAND WATERWAYS

UN	1133	ADHESIVES	3	II	LIMITED QUANTITY

#### TRANSPORT CANADA - RAIL

UN	1133	ADHESIVES	3	II	LIMITED QUANTITY

#### TRANSPORT CANADA - ROAD

UN	1133	ADHESIVES	3	II	MARINE POLLUTANT:( NORMAL- HEXANE)LIMI TED QUANTITY

#### U.S. DOT - INLAND WATERWAYS

UN	1133	Adhesives	3	II	

#### U.S. DOT - RAIL

UN	1133	Adhesives	3	II	

#### U.S. DOT - ROAD

UN	1133	ADHESIVOS	3	II	

\*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Marine pollutant	no
------------------	----

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

#### SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

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Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
TOLUENE	108-88-3	1000	1798.900872

**SARA 311/312 Hazards** : Chronic Health Hazard  
Acute Health Hazard  
Fire Hazard

**SARA 313 Component(s)**

TOLUENE	108-88-3	55.58 %
N-HEXANE	110-54-3	16.17 %
XYLENE	1330-20-7	5.02 %
ETHYL BENZENE	100-41-4	1.54 %

**California Prop 65**

WARNING! This product contains a chemical known to the State of California to cause cancer.

ETHYL BENZENE	100-41-4
CARBON BLACK	1333-86-4
BENZENE	71-43-2
NAPHTHALENE	91-20-3

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

TOLUENE	108-88-3
BENZENE	71-43-2

**The components of this product are reported in the following inventories:**

TSCA : On TSCA Inventory

DSL : This product contains one or several components that are not on the Canadian DSL and have annual quantity limits.

AICS : Not in compliance with the inventory

ENCS : Not in compliance with the inventory

KECI : Not in compliance with the inventory

PICCS : Not in compliance with the inventory

IECSC : Not in compliance with the inventory

**Inventories**

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AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

## SECTION 16. OTHER INFORMATION

### Further information

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NFPA:	HMIS III:						
<p>Flammability</p> <p>Health 2 3 Instability 0</p> <p>Special hazard.</p>	<table> <tr> <td>HEALTH</td><td>2*</td></tr> <tr> <td>FLAMMABILITY</td><td>3</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> <p>0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p>	HEALTH	2*	FLAMMABILITY	3	PHYSICAL HAZARD	0
HEALTH	2*						
FLAMMABILITY	3						
PHYSICAL HAZARD	0						

### NFPA Flammable and Combustible Liquids Classification

Flammable Liquid Class IB

Full text of H-Statements referred to under sections 2 and 3.

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H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
H303	May be harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H316	Causes mild skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H333	May be harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer if inhaled.
H361	Suspected of damaging fertility or the unborn child.
H361d	Suspected of damaging the unborn child.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs through prolonged or repeated exposure if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure if inhaled.
H401	Toxic to aquatic life.
H402	Harmful to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

#### Further information

Sources of key data used to compile the Safety Data Sheet

Ashland internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

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ISO : International Organization for Standardization  
 logPow : octanol-water partition coefficient  
 LCxx : Lethal Concentration, for xx percent of test population  
 LDxx : Lethal Dose, for xx percent of test population.  
 ICxx : Inhibitory Concentration for xx of a substance  
 Ecxx : Effective Concentration of xx  
 N.O.S.: Not Otherwise Specified  
 OECD : Organization for Economic Co-operation and Development  
 OEL : Occupational Exposure Limit  
 P-Statement : Precautionary Statement  
 PBT : Persistent , Bioaccumulative and Toxic  
 PPE : Personal Protective Equipment  
 STEL : Short-term exposure limit  
 STOT : Specific Target Organ Toxicity  
 TLV : Threshold Limit Value  
 TWA : Time-weighted average  
 vPvB : Very Persistent and Very Bioaccumulative  
 WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act  
 DOT : Department of Transportation  
 FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act  
 HMIRC : Hazardous Materials Information Review Commission  
 HMIS : Hazardous Materials Identification System  
 NFPA : National Fire Protection Association  
 NIOSH : National Institute for Occupational Safety and Health  
 OSHA : Occupational Safety and Health Administration  
 PMRA : Health Canada Pest Management Regulatory Agency  
 RTK : Right to Know  
 WHMIS : Workplace Hazardous Materials Information System



AMERICAN HYDROTECH, INC.  
303 East Ohio Street  
Chicago, Illinois 60611  
(312) 337-4998

## MATERIAL SAFETY DATA SHEET

IRMA STONE FABRIC FILTER  
BLACK

### SECTION I

CHEMICAL NAME & SYNONYMS:  
CHEMICAL FAMILY:  
TRADE NAME & SYNONYMS: Filter Fabric  
FORMULA:

### SECTION II – HAZARDOUS INGREDIENTS

<u>INGREDIENT</u>	<u>C.A.S. #</u>	<u>%</u>	<u>TLV EXPOSURE LIMITS</u>
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This product does not meet the definition of a hazardous material as defined by 29 CFR Part 1910.1200 (OSHA).

### SECTION III – PHYSICAL DATA

BOILING POINT (°F):

PERCENT VOLATILE BY VOLUME:

VAPOR PRESSURE (mmHg @ 20°C):

VAPOR DENSITY (AIR=1):

EVAPORATION RATE (BUTYL ACETATE=1):

SPECIFIC GRAVITY (H<sub>2</sub>O=1):

(Butyl Acetate = 1) :

SOLUBILITY IN WATER:

APPEARANCE AND ODOR:

### SECTION IV – FIRE AND EXPLOSION HAZARDS

FLASH POINT (METHOD USED):

FLAMMABLE LIMITS:

EXTINGUISHING MEDIA:

SPECIAL FIRE FIGHTING PROCEDURES:

UNUSUAL FIRE/EXPLOSION HAZARDS:



**SECTION V – HEALTH HAZARD DATA**

THRESHOLD LIMIT VALUE(S):

SIGNS/SYMPTOMS/EFFECTS OF OVEREXPOSURE:  
EMERGENCY AND FIRST AID PROCEDURES:

EYES:

SKIN:

INHALATION:

INGESTIONS:

**SECTION VI – REACTIVITY DATA**

STABILITY:  
CONDITIONS TO AVOID:

HAZARDOUS POLYMERIZATION:  
CONDITIONS TO AVOID:

INCOMPABILITY (MATERIALS TO AVOID):  
HAZARDOUS DECOMPOSITION PRODUCTS:

**SECTION VII – SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

WASTE DISPOSAL METHODS:

**SECTION VIII – SPECIAL PROTECTION INFORMATION**

VENTILATION (TYPE):

RESPIRATORY PROTECTION:

PROTECTIVE CLOTHING & EQUIPMENT:

**SECTION IX – SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

*Information presented herein has been compiled from sources considered to be dependable and current, and is accurate and reliable to the best of our knowledge, but is not guaranteed to be so. It is the user's responsibility to determine for himself the suitability of this information for his safe use of this product, and to adopt such proper safety precautions as may be necessary to provide adequate worker and plant protection.*



AMERICAN HYDROTECH, INC.  
303 East Ohio Street  
Chicago, Illinois 60611  
(312) 337-4998

## MATERIAL SAFETY DATA SHEET

PMR STONE FILTER FABRIC  
WHITE

### SECTION I

CHEMICAL NAME & SYNONYMS:  
CHEMICAL FAMILY: Polypropylene Non-Woven Geotextile  
TRADE NAME & SYNONYMS: Filter Fabric  
FORMULA:

### SECTION II – HAZARDOUS INGREDIENTS

INGREDIENT	C.A.S. #	%	EXPOSURE LIMITS
Polypropylene	9003-07-0	90 – 99.5	OSHA total dust: 15 mg/m <sup>3</sup> OSHA respirable: 5 mg/m <sup>3</sup> ACGIH TLV-TWA: 10 mg/m <sup>3</sup>
Polyethylene	9002-88-4	0 – 8	No limit established
Lubricants – fatty acids or esters	Blend	0 – 1.5	No limit established
UV Stabilizers	Various	0 – 0.9	No limit established
Pigments	Various	0 – 1.0	No limit established
Carbon Black	1333-86-4	0 – 2.0	OSHA PEL: 3.5 mg/m <sup>3</sup> ACGIH TWA: 3.5 mg/m <sup>3</sup>

This product has been evaluated and does not require a hazard warning on the label under OSHA criteria. It is an article and, as such, is excluded per 29 CFR 1910.1200(b)(6)(v) of the OSHA Hazard Communication Standard.

### SECTION III – PHYSICAL DATA

BOILING POINT (°F):	N.App.	PERCENT VOLATILE BY VOLUME:	N.App
VAPOR PRESSURE (mmHg @ 20°C):	N.App		
VAPOR DENSITY (AIR=1):	N.App	EVAPORATION RATE (BUTYL ACETATE=1):	N.App
SPECIFIC GRAVITY (H <sub>2</sub> O=1):	0.9		

SOLUBILITY IN WATER: Negligible, below 0.1%  
APPEARANCE AND ODOR: Non-woven white fabric. Odorless.

### SECTION IV – FIRE AND EXPLOSION HAZARDS

FLASH POINT (METHOD USED): >600°F (315°C)  
FLAMMABLE LIMITS: N. Av.

EXTINGUISHING MEDIA: Agents approved for Class A hazards (e.g., foam, steam) or water fog.  
SPECIAL FIRE FIGHTING PROCEDURES: Move material away from fire area if it can be done without risk. Avoid inhalation of combustion by-products. Stay upwind and keep out of low areas.  
UNUSUAL FIRE/EXPLOSION HAZARDS: None identified.

**SECTION V – HEALTH HAZARD DATA**

THRESHOLD LIMIT VALUE(S): See Section II

SIGNS/SYMPTOMS/EFFECTS OF OVEREXPOSURE: Particles/fibers may cause irritation/discomfort  
EMERGENCY AND FIRST AID PROCEDURES:

EYES: Flush with water for at least 15 minutes. Get medical attention if irritation develops.

SKIN: Wash exposed skin with soap and water. Get medical attention if irritation develops.

INHALATION: If adverse effects occur, remove to uncontaminated area. Get medical attention.

INGESTIONS: If a large amount is swallowed, get medical attention.

**SECTION VI – REACTIVITY DATA**

STABILITY: Stable

CONDITIONS TO AVOID: None identified.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: None identified.

INCOMPABILITY (MATERIALS TO AVOID): None identified.

HAZARDOUS DECOMPOSITION PRODUCTS: Incomplete burning can produce carbon monoxide and/or carbon dioxide and other harmful products.

**SECTION VII – SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain and remove by mechanical means.

WASTE DISPOSAL METHODS: Enclosed-controlled incineration is recommended unless directed otherwise by applicable ordinances.

**SECTION VIII – SPECIAL PROTECTION INFORMATION**

VENTILATION (TYPE): None required.

RESPIRATORY PROTECTION: None required; however, use of adequate ventilation is good industrial practice.

PROTECTIVE CLOTHING & EQUIPMENT: None required; however, use of eye protection and protective gloves/clothing, is good industrial practice.

**SECTION IX – SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: No special requirements.

*Information presented herein has been compiled from sources considered to be dependable and current, and is accurate and reliable to the best of our knowledge, but is not guaranteed to be so. It is the user's responsibility to determine for himself the suitability of this information for his safe use of this product, and to adopt such proper safety precautions as may be necessary to provide adequate worker and plant protection.*



## **Hazard Communication Safety Data Sheet**

### **Section 1. Identification**

Item type: Woven Polypropylene Geotextile  
Distributor's Name : Systemfilter

American Hydrotech, Inc.  
303 East Ohio Street, Suite 2700  
Chicago, IL 60611

Phone: 800-877-6125

Date Prepared/Revised:  
June 1<sup>st</sup>, 2015

### **Section 2. Hazard(s) identification**

Overview: No hazardous components in geotextile fabrics at or above threshold limit values. Polypropylene nonwoven fabrics are "articles" and are not hazardous under OSHA Hazard Communication Standard (29 CFR 1910.120). GHS Label Elements are not required.

### **Section 3. Composition/information on ingredients**

Ingredient Chemical Name (CAS#) Common Name	OSHA PEL or TWA	ACGIH TLV	Weight %
Polypropylene Resin (9003-07-0)	Not Applicable	Not Applicable	94 – 99%
Carbon Black (1333-86-4)	3.5 mg/cm TWA	3.5 mg/cm TWA	0 – 5%
Fatty Glycol and Additives (non-hazardous)	Not Applicable	Not Applicable	< 1%



#### **Section 4. First-aid measures**

Eye Contact: Flush with Water

Skin Contact: Treat as thermal burn if contact with molten. Wash with soap and water.

In case of irritation, consult a physician.

Inhalation: Not likely in current form.

Ingestion: Not likely in current form.

#### **Section 5. Fire-fighting measures**

Flash Point: > 600 degrees (F)

Extinguishing Media: Dry Chemical, CO<sub>2</sub>, Foam, Water, Halon

Special Fire Fighting Procedure:

Avoid Inhalation of Vapors

Use self-contained breathing apparatus when fire fighting in confined areas

Unusual Fire and Explosion Hazards:

Treat as a solid that can burn. Generally burns slowly with low smoke density and flaming drips.

Burns with high smoke density under certain conditions.

#### **Section 6. Accidental release measures**

No environmental threat is expected from release.

#### **Section 7. Handling and storage**

Handling: Practice reasonable care and caution in handling. Large rolls may require lifting devices.

Waste Disposal: Place in appropriate disposal facility in compliance with local regulation

Storage: In cool, dry locations away from oxidizing materials.



### **Section 8. Exposure controls/personal protection**

Use NIOSH respirators when hot/molten product.

Protective Gloves: Required when handling molten product

Practice general hygiene by washing hands and clothes after handling.

### **Section 9. Physical and chemical properties**

Boiling Point: Not Applicable

Vapor Pressure: Not Applicable

Specific Gravity: 0.9-0.905

Melting Point: 120-170 Degrees (C)

Vapor Density: Not Applicable

Evaporation Rate: Not Applicable

Solubility in Water: Not Applicable

Appearance and Odor: Essentially odorless; wound on cardboard core

### **Section 10. Stability and reactivity**

Material is stable. Hazardous polymerization will not occur. Do not store near heat, flame, or strong oxidants.

### **Section 11. Toxicological information**

Inhalation: Not likely under normal use.

Injection: Not likely under normal use.

Ingestion: Not likely in current form.

Skin Contact: Prolonged contact may cause mild skin irritations to some individuals.

Eye Effects: Not toxic, may irritate eyes.

Target Organs: None

Chronic: There are no known health effects from long term use or contact.

Carcinogenicity: The International Agency for Research on Cancer evaluation is that, "Carbon black (airborne, unbound particles of respirable size) is possibly carcinogenic to humans (Group 2B)".



## **Section 12. Ecological Information**

Environmental Data: Not expected to be hazardous to the environment in present form.

## **Section 13. Disposal Information**

Disposal: Spent material should be recycled or disposed according to current regulations. Does not contain RCRA regulated materials.

## **Section 14. Transport Information**

DOT Classification: Not regulated

Proper Shipping Name: Wrapped rolls of fabric made from synthetic fibers. NMFC 49265 Sub 9, Class 70.

## **Section 15. Regulatory Information**

USA TSCA: This product is considered an article and is exempt from TSCA Requirements.

Canada Domestic Substances List (DSL): This product is not specified on the DSL or NDSL.

### **SARA TITLE III:**

CERCLA/SARA (302) Extremely Hazardous Substances: None listed

SARA (311,312) Hazard Class: None listed      SARA (313) Chemicals: None listed

California Proposition 65: Carbon Black (airborne, unbound particles of respirable size), CAS# 1333-86-4 is listed as a possible carcinogen.

CANADA REGULATIONS (WHMIS): Not Listed



## **Section 16. Other Information**

Last Revised: July 1<sup>st</sup>, 2015



# THERMA-FLO

## INSULATING DRAINAGE PANELS

### SAFETY DATA SHEET

The THERMA-FLO INSULATING DRAINAGE PANEL is a composite of STYROFOAM® RM brand extruded polystyrene foam thermal insulation with a polyester fabric adhered with THERMOLOCK® brand adhesive. We will treat this SDS as a three-part document covering: (A) the extruded polystyrene foam thermal insulation, (B) the polyester fabric, and (C) the adhesive.

#### **(A) STYROFOAM® RM BRAND EXTRUDED POLYSTYRENE THERMAL INSULATION**

##### **1. Product and Company Identification**

*Product Name:* STYROFOAM® ROOFMATE® 2.00 x 24 inch Extruded Foam Roof Insulation (Product Code: 39067, MSD: 006839)

*Manufacturer:* The Dow Chemical Company, Midland, MI 48674 (800-258-2436)  
Emergency Phone: 989-636-4400

##### **2. Composition/Information on Ingredients:**

<b><u>Chemical Name</u></b>	<b><u>CASRN</u></b>	<b><u>Concentration</u></b>
Styrene, polymers	9003-53-6	>=0.0 - <=10%
1,1,1,2-Tetrafluoroethane	811-97-2	>=5.0 - <=10%
2-Propenenitrile, polymer with ethenybenzene	9003-54-7	>=60.0 - <=100%
Hologenated flame retardant		

This document was prepared pursuant to the OSHA hazard communication standard (29 CFR 1910.1200(g)). In addition, other substances not hazardous per this OSHA standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard. This part of the document has been taken from SDS information supplied to us from The Dow Chemical Company.

##### **3. Physical and Chemical Properties:**

Boiling Point .....Not Applicable  
Vapor Pressure.....Not Applicable  
Vapor Density.....Not Applicable  
Solubility in water .....None  
Specific Gravity/Density .....0.027 to 0.064  
Appearance .....Blue Rigid Cellular Foam Board  
Odor.....No Odor

##### **4. Fire and Explosion Hazard Data:**

Flash Point.....670°F/354°C Flash Ignition Temperature  
Method Used.....ASTM D1929 Proc. B.  
Flammable Limits LFL .....Not Applicable  
Flammable Limits UFL.....Not Applicable  
Extinguishing Media .....Foam, Water, Carbon Dioxide, Dry Chemical  
Melting Point .....90 - 130°C (194-266°F) Estimated

®

# THERMA-FLO INSULATING DRAINAGE PANELS SAFETY DATA SHEET

## 4. Fire and Explosion Hazard Data (continued):

*Hazardous Combustion Products:* In smoldering or flaming conditions, carbon monoxide, carbon dioxide and carbon are generated. Evolution of small amounts of hydrogen halides occurs when burned or heated above 250°C (480°F). Under fire conditions polymers decompose. The smoke may contain polymer fragments of varying compositions in addition to unidentified and/or irritating compounds. Studies have shown that the products of combustion of this foam are not more acutely toxic than the products of combustion of common building materials, such as wood.

*Fire-fighting Instructions:* Keep people away. Isolate fire area and deny unnecessary entry. If material is molten, do not apply direct water stream. Use fine water spray or foam. Soak thoroughly with water to cool and prevent re-ignition. Cool surroundings with water to localize fire zone.

*Protective Fire-fighting Equipment:* Wear positive-pressure, self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots and gloves). If protective equipment is not available or not used, fight fire from protected location or safe distance.

## 5. Reactivity Data:

*Stability:* Thermally stable at typical use temperatures.

Conditions To Avoid - Avoid direct sunlight. Maximum use temperature is 73°C (165°F). Avoid temperatures over 300°C (572°F). Product can decompose at elevated temperatures.

*Incompatibility with Other Materials:* Avoid contact with oxidizing materials. Avoid contact with aldehydes, amines, esters, liquid fuels, and organic solvents.

*Hazardous Decomposition Products:* Does not normally decompose. Evolution of small amounts of hydrogen halides occurs when heated above 250°C. Under high heat, non-flaming conditions, small amounts of aromatic hydrocarbons such as styrene and ethylbenzene are generated. Hazardous decomposition products depend upon temperature, air supply and the presence of other materials. Hazardous decomposition products may include and are not limited to ethylbenzene, aromatic compounds, aldehydes, hydrogen bromide, hydrogen chloride, hydrogen fluoride, polymer fragments, and styrene.

*Hazardous Polymerization:* Will not occur.

## 6. Health Hazard Data:

*Eye:* Solid or dust may cause irritation or corneal injury due to mechanical action.

*Skin Contact:* Essentially nonirritating to skin. Mechanical injury only. Skin absorption is unlikely due to the physical properties.

*Ingestion:* Single dose oral toxicity is considered to be low. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury. May cause choking or blockage of the digestive tract if swallowed.

# THERMA-FLO

## INSULATING DRAINAGE PANELS

### SAFETY DATA SHEET

#### 6. Health Hazard Data (continued):

*Inhalation:* Dust may cause irritation to the upper respiratory tract (nose and throat). Vapors/fumes released during thermal operations such as hot wire cutting may cause eye and respiratory irritation. Concentrations of the blowing agents anticipated incidental to proper handling are expected to be well below those which cause acute inhalation effects and below exposure guidelines. The LC50 has not been determined.

*Systemic (Other Target Organ) Effects:* Based on available data, repeated exposures to dusts of this material are not anticipated to cause significant adverse effects.

*Cancer Information:* Contains component(s) which did not cause cancer in long-term animal studies.

*Teratology (Birth Defects):* Contains component(s) which did not cause birth defects in laboratory animals. The component(s) is/are 1,1,1,2-Tetrafluoroethane.

*Reproductive Effects:* No relevant information found.

#### 7. First Aid:

*Eyes:* Flush eyes with plenty of water; mechanical effects only.

*Skin:* Wash off in flowing water or shower.

*Ingestion:* If swallowed, seek medical attention. May cause gastrointestinal blockage. Do not give laxatives. Do not induce vomiting unless directed to do so by medical personnel.

*Inhalation:* Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

*Note to Physician:* No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient. Exposure may increase "myocardial irritability." Do not administer sympathomimetic drugs unless absolutely necessary.

#### 8. Handling and Storage:

*Handling:* Maintain good housekeeping. Layers of flammable dusts should not be permitted to accumulate. See Section 10, Exposure Controls/Personal Protection.

**WARNING:** In order to prevent buildup of combustible vapors, do not store large quantities of this product in unventilated spaces. Transport bulk shipments of this product in ventilated vehicles.

# THERMA-FLO

## INSULATING DRAINAGE PANELS

### SAFETY DATA SHEET

#### 8. **Handling and Storage (continued):**

*Storage:* Flammable vapors may accumulate in some storage situations. Storage, use and handling areas should be "No Smoking" areas. See Section 10, Exposure Controls/Personal Protection.

Minimize sources of ignition, such as static buildup, heat, spark or flame.

When storing or fabricating large quantities of extruded polystyrene foam, the blowing agents (i.e. 1,1,1,2-Tetrafluoroethane.) released from the foam, if any, may thermally decompose to hydrogen chloride, which tends to accelerate corrosion or rust development of heaters, boilers, gas fired recirculating air furnaces or heaters, or gas water heaters.

This polystyrene foam plastic product is combustible and should be protected from flame and other high heat sources. It should be installed with code-acceptable thermal barriers or used in approved alternative constructions.

#### 9. **Accidental Release Measures:** (See Section 15 for Regulatory Information):

*Protect People:* Clear non-emergency personnel from area. Use appropriate safety equipment. For additional information, refer to Section 10, Exposure Controls/Personal Protection.

*Protect the Environment:* Firewater run off may be toxic.

*Cleanup:* Pick up, or if dust or in small pieces, sweep up and place in suitable container for disposal. See Section 13, Disposal Considerations.

#### 10. **Exposure Controls/Personal Protection:**

*Engineering Controls:* Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

*Respiratory Protection:* Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, including but not limited to saw, router, or hot wire cutting, use an approved air-purifying respirator. In dusty atmospheres, use an approved dust respirator.

*Skin Protection:* No precaution other than clean body-covering clothing should be needed.

*Eye Protection:* Use Safety Glasses. If there is a potential for exposure to particles, which could cause mechanical injury to the eye, wear chemical goggles.

*Exposure Guideline(s):* 1,1,1,2-Tetrafluoroethane: AIHA WEEL is 1000 ppm, TWA.

#### 11. **Toxicological Information:** (See Section 6 for Health Hazard Data. For detailed toxicological data, write or call The Dow Chemical Company)

*Mutagenicity (Effects on Genetic Material):* For the minor component(s) 1,1,1,2-Tetrafluoroethane., in vitro mutagenicity studies were negative in some cases and positive in other cases. Animal mutagenicity studies were negative.

# THERMA-FLO

## INSULATING DRAINAGE PANELS

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#### 12. Ecological Information:

*Ecotoxicological information on this product or its components appear in this section when such data is available.*

##### **Toxicity**

##### **Acute toxicity to fish**

Not expected to be acutely toxic to aquatic organisms.

##### **Persistence and degradability**

**Biodegradability:** Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

##### **Bioaccumulative potential**

**Bioaccumulation:** No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000).

##### **Mobility in soil**

In the terrestrial environment, material is expected to remain in the soil.

In the aquatic environment, material is expected to float.

#### 13. Disposal Considerations: (See Section 15 for Regulatory Information)

*Disposal:* All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

*For unused & uncontaminated product,* the preferred options include sending to a licensed, permitted: recycler, re-claimer, incinerator or other thermal destruction device, landfill.

For additional information, refer to Section 8, Handling & Storage Information.

The Dow Chemical Company can provide names of information resources to help identify waste management companies and other facilities, which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Call Dow Customer Information at 800-258-2436 or 989-832-1556 for further details.

#### 14. Transportation Information:

*Department of Transportation (DOT):* This product is not regulated by the DOT when shipped domestically by land.

*Canadian TDG Information:* This product is not regulated by the TDG when shipped domestically by land.

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## INSULATING DRAINAGE PANELS

### SAFETY DATA SHEET

15. **Regulatory Information:** (Not meant to be all-inclusive - selected regulations represented)

**NOTICE:** The information contained herein is based on data considered to be accurate. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with Federal, State/Provincial, and local laws. While the information is believed to be reliable, NO Warranty, expressed or implied, is given in regards to the accuracy of this data or the results to be obtained from the use thereof. Since the use of this information and the conditions and use of this product are controlled by the user, it is the user's obligation to determine the conditions of safe use of the product. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

#### **OSHA Hazard Communication Standard**

-This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

#### **Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312**

-This product is not a hazardous chemical under 29CFR 1910.1200, and therefore is not covered by Title III of SARA.

#### **Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313**

-This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### **Pennsylvania Worker and Community Right-To-Know Act:**

-To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

#### **California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)**

-This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

#### **United States TSCA Inventory (TSCA)**

-The product meets the definition of an article and is exempt from inventory requirements.

# THERMA-FLO

## INSULATING DRAINAGE PANELS

### SAFETY DATA SHEET

#### *Canadian Regulations*

*WHMIS Information:* The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is:

This Product is not a "Controlled Product" under WHMIS.

*Canadian Environmental Protection Act (CEPA):* All substances in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

#### **16. Other Information:**

*National Fire Protection Association (NFPA) Ratings:*

Health.....1  
Flammability .....1  
Reactivity .....0

#### **(B) 2024 POLYESTER FABRIC**

##### **1. Product and Company Identification:**

*Product Name:* 2024 Polyester Fabric

*Manufacturer:* BBA Fiberweb, Old Hickory, TN 37138 (800-284-2780)  
Emergency Contact: Chemtrec, 800-424-9300

##### **2. Composition/Information on Ingredients:**

<b>Chemical Name</b>	<b>CASRN</b>	<b>Concentration</b>
Polyester	25038-59-9	>85%
Co-Polyester Resin	Mixture	>15%
Whitner Masterbatch	Mixture	>.2%
Dimethylpolysiloxanes	63148-62-9	trace

This document was prepared pursuant to the OSHA hazard communication standard (29 CFR 1910.1200). This product is not hazardous according to the criteria specified in the aforementioned. This product is considered an article and does not require an MSDS. This part of the document has been taken from MSDS information supplied to us from BBA Fiberweb.

##### **3. Physical and Chemical Properties:**

Boiling Point .....Not Applicable  
Melting Point .....1.3-1.4  
Percent Volatiles.....Not Applicable  
Vapor Pressure.....Not Applicable  
Vapor Density.....>165°C/ Not Applicable  
Packing Density .....Not Applicable  
Evaporation Rate .....Not Applicable  
Solubility in water .....Negligible



# THERMA-FLO

## INSULATING DRAINAGE PANELS

### SAFETY DATA SHEET

#### 3. Physical and Chemical Properties (continued):

Specific Gravity/Density.....NIL  
Appearance.....White fabric  
Odor.....Not Applicable  
pH.....Not Applicable  
Physical State.....Solid

#### 4. Fire and Explosion Hazard Data:

Flash Point.....Not Applicable  
Method Used.....Not Applicable  
Lower Explosive Limit .....Not Applicable  
Upper Explosive Limit .....Not Applicable  
Extinguishing Media .....Water spray, foam, carbon dioxide or dry chemical

*Hazardous Combustion Products:* Upon decomposition this product may emit carbon dioxide, carbon monoxide and/or low molecular weight hydrocarbons.

*General Hazards:* Solid Material may burn upon extended exposure to open flames.

*Protective Fire-fighting Equipment:* As in any fire, wear self-contained breathing apparatus and full protective gear.

#### 5. Reactivity Data:

*Stability:* Stable under ordinary conditions or use and storage.

Conditions To Avoid - Combustible when exposed to open flames.

*Incompatibility with Other Materials:* None known.

*Hazardous Decomposition Products:* Carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbon may be emitted upon decomposition.

*Hazardous Polymerization:* Will not occur.

#### 6. Health Hazard Data:

*Eye:* Not expected to be a problem, being that this product is an inert solid.

*Skin Contact:* Possible mechanical irritation.

*Ingestion:* Not Applicable

*Inhalation:* Not expected to be a problem, being that this product is an inert solid.

*Emergency Overviews:* None of the components in this material are considered hazardous.

#### 7. First Aid:

*Eyes:* Rinse eyes with water for at least 15 minutes. If irritation persists, contact physician.

*Skin:* Wash affected area with soap and water.

*Ingestion:* Not Applicable



# THERMA-FLO INSULATING DRAINAGE PANELS SAFETY DATA SHEET

**7. First Aid (continued):**

*Inhalation:* Not Applicable

*Note to Physician:* No health conditions aggravated by exposure are identified.  
Contact the poison control center if any problems occur.

**8. Handling and Storage:**

*Handling:* Avoid exposure to heat, sparks or open flames.

*Storage:* Store material in cool (below 140°F) warehouse that is equipped with a sprinkler system.

Ensure product is not stacked too high.

Store product off the floor to prevent water damage.

**9. Accidental Release Measures:** (See Section 15 for Regulatory Information)

*Containment Procedures:* Sweep waste fabric into a pile.

*Evacuation Procedures:* Not Applicable

*Cleanup Procedures:* Sweep waste fabric into a waste container and recycle, incinerate or landfill in conformity with local disposal regulations.

*Special Procedures:* None

**10. Exposure Controls/Personal Protection:**

<b>Component</b>	<b>CASRN</b>	<b>Exposure Limits</b>
Polyester	25038-59-9	Manufacturer Limit: 10 mg/m <sup>3</sup> , 8 hr. TWA, total dust 10 mg/m <sup>3</sup> , 8 hr. TWA, respirable dust
Co-Polyester Resin	Mixture	Manufacturer Limit: 10 mg/m <sup>3</sup> , 8 hr. TWA, total dust 10 mg/m <sup>3</sup> , 8 hr. TWA, respirable dust
Whitner Masterbatch	Mixture	ACGIH: None Available OSHA: None Available
Dimethylpolysiloxanes	63148-62-9	ACGIH: None Available OSHA: None Available

*Engineering Controls:* Normal room ventilation is usually adequate.

*Respiratory Protection:* None usually required

*Skin Protection:* None usually required

*Eye Protection:* None usually required

*General Protection:* Follow individual plant safety rules.

# THERMA-FLO

## INSULATING DRAINAGE PANELS

### SAFETY DATA SHEET

#### 11. Toxicological Information:

*Acute and Chronic Toxicity:* No components of this product are known to be hazardous according to the criteria specified in the OSHA hazard communication standard (29 CFR 1910.1200).

Component	CAS Number	LD50/CD50
Polyester	25038-59-9	None Available
Co-Polyester Resin	Mixture	None Available
Whitner Masterbatch	Mixture	None Available
Dimethylpolysiloxanes	63148-62-9	Acute Oral LD50:>40,000 mg/kg -Acute Dermal; None (rat)

*Carcinogenicity:* Product is considered to be non-hazardous.

*Epidemiology:* No information available.

*Neurotoxicity:* No information available.

*Mutagenicity:* No information available.

*Teratogenicity:* No information available.

*Other Toxicological Information:* Specific toxicity testing has not been performed on this product. Hazard evaluation is based on information from similar products, raw material data, and technical literature.

#### 12. Ecological Information:

*General product information:* No available information.

*Environmental Fate:* No available information.

#### 13. Disposal Considerations: (See Section 15 for Regulatory Information)

*General Information:* None identified

*Component Waste Numbers:* No EPA Waste Numbers are applicable for this product.

*Disposal:* Dispose of container and unused contents in accordance with federal, state and local requirements. Processing, use or contamination of this product may change the waste management options.

For additional information, refer to Section 8, Handling & Storage Information.

#### 14. Transportation Information:

Product is not regulated.

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## INSULATING DRAINAGE PANELS

### SAFETY DATA SHEET

15. **Regulatory Information:** (Not meant to be all-inclusive - selected regulations represented)

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*U.S. Federal Regulations:*

This material meets the criteria of 21CFR177.1630 of the FDA contact regulations

<b>Component</b>	<b>CAS Number</b>	<b>SARA 302</b>	<b>SARA 313</b>	<b>CERCLA</b>
Polyester	25038-59-9	No	No	No
Co-Polyester Resin	Mixture	No	No	No
Whitner Masterbatch	Mixture	No	No	No
Dimethylpolysiloxanes	63148-62-9	No	No	No

*State Right-to-Know:*

Other state regulations may apply. Check individual state requirements

<b>Component</b>	<b>CAS Number</b>	<b>CA</b>	<b>FL</b>	<b>MA</b>	<b>MN</b>	<b>NJ</b>	<b>PA</b>
Polyester	25038-59-9	No	NK	NK	NK	No	NK
Co-Polyester Resin	Mixture	No	NK	NK	NK	No	NK
Whitner Masterbatch	Mixture	No	NK	NK	NK	NK	NK
Dimethylpolysiloxanes	63148-62-9	No	NK	NK	NK	NK	NK

NK=Not Known

*WHMIS IDL:*

<b>Component</b>	<b>CAS Number</b>	<b>TSCA</b>	<b>DSL/NDSL</b>	<b>EINECS</b>
Polyester	25038-59-9	Yes	Yes	Yes
Co-Polyester Resin	Mixture	Yes	Yes	Yes
Whitner Masterbatch	Mixture	Yes	NK	NK
Dimethylpolysiloxanes	63148-62-9	No	No	No

NK=Not Known

# THERMA-FLO DRAINAGE PANELS SAFETY DATA SHEET

**16. Other Information:**

*National Fire Protection Association (NFPA) Ratings:*

Health.....0

Flammability .....1

Reactivity .....0

*HMIS Ratings:*

Health.....0

Flammability .....1

Reactivity .....0

Personal Protection.....A

**(C) THERMOLOCK® ADHESIVE**

## 1. Product and Company Identification

*Product Name:* THERMOLOCK® (Manufacturer ID: 5700)

**Manufacturer:** Imperial Adhesives, Inc., Cincinnati, OH 45237 (513-351-1300)

Emergency (DOT) Contact: 800-424-9300/703-527-3887

## 2. Composition/Information on Ingredients:

### Chemical Name

CAS Number

## List

Contains no known hazardous ingredients.

This part of the document has been taken from MSDS information supplied to us from Imperial Adhesives, Inc.

### 3. Physical and Chemical Properties:

Boiling Point .....Not Applicable

Percent Volatiles.....0

Vapor Density.....Not Applicable

Evaporation Rate .....Not Applicable

VOC.....00 lb/gal less water & NPRS\*

0 g/l less water CALCULATED

VOC.....00 lb/gal solids

0 g/l solids CALCULATED

Weight lb/gal.....7.2

Specific Gravity/Density.....0.9

All Physical data determined at 68°F (20°C) 760mm Hg

### \*Negligibly Photochemically Reactive Materials

#### 4. Fire and Explosion Hazard Data:

Flash Point.....Not Applicable

Flammable Limits UAL.....Not Applicable

Extinguishing Media .....None should be needed.

*Fire-fighting Instructions:* No special instructions known.

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## INSULATING DRAINAGE PANELS

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*Protective Fire-fighting Equipment:* No special equipment known.

**5. Reactivity Data:**

*Stability:* Normally stable.

Conditions To Avoid - None known

*Incompatibility with Other Materials:* None known

*Hazardous Decomposition Products:* Burning, including when heated by welding or cutting. Will produce smoke, carbon monoxide and carbon dioxide.

*Hazardous Polymerization:* Will not occur.

Conditions To Avoid - None known

**6. Health Hazard Data:**

*Eye:* May cause transient eye irritation.

*Skin Contact:* May cause transient skin irritation.

*Ingestion:* Unknown

*Inhalation:* May cause respiratory irritation.

*Repeated Exposure:* Unknown

**7. First Aid:**

*Eyes:* Flush eyes with water until relieved. Consult a physician.

*Skin:* None should be needed.

*Ingestion:* None should be needed.

*Inhalation:* Remove to fresh air.

*Note to Physician:* Any treatment that might be required for overexposure should be directed at the control of symptoms and the clinical conditions.

**8. Handling and Storage:**

*Precautions:* None likely to be needed.

**9. Accidental Release Measures** (See Section 15 for Regulatory Information):

*Containment Procedures:* Confine in small area; use absorbent to clean up. Place in container for disposal.

**10. Exposure Controls/Personal Protection:**

*Respiratory Protection:* Not likely to be needed.

*Ventilation:* Natural ventilation should be adequate under normal conditions.

*Skin Protection:* Not likely to be needed.

**11. Toxicological Information:**

No information available.

# THERMA-FLO INSULATING DRAINAGE PANELS SAFETY DATA SHEET

**12. Ecological Information:**

No information available.

**13. Disposal Considerations** (See Section 15 for Regulatory Information):

*Disposal:* Dispose in accordance with federal, state and local regulations.

**14. Transportation Information:**

Product is not regulated.

**15. Regulatory Information:** (Not meant to be all-inclusive - selected regulations represented)

*NOTICE:* The information contained herein is based on data considered to be accurate. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with Federal, State/Provincial, and local laws. While the information is believed to be reliable, NO Warranty, expressed or implied, is given in regards to the accuracy of this data or the results to be obtained from the use thereof. Since the use of this information and the conditions and use of this product are controlled by the user, it is the user's obligation to determine the conditions of safe use of the product. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

**16. Other Information**

*National Fire Protection Association (NFPA) Ratings*

Health.....Not Applicable  
Flammability .....Not Applicable  
Reactivity .....Not Applicable

*HMIS Ratings*

Health.....0  
Flammability .....0  
Reactivity .....0



# SAFETY DATA SHEET

## 1. Identification

**Product identifier** SECUROCK® Brand Gypsum-Fiber Roof Board

**Other means of identification**

**SDS number** 54000004007

**Synonyms** Gypsum Panels, Drywall, Plasterboard, Wallboard

**Recommended use** Exterior use.

**Recommended restrictions** Use in accordance with manufacturer's recommendations.

### Manufacturer/Importer/Supplier/Distributor information

**Company name** United States Gypsum Company

**Address** 550 West Adams Street  
Chicago, Illinois 60661-3637

**Telephone** 1-800-874-4968

**Website** www.usg.com

**Emergency phone number** 1-800-507-8899

## 2. Hazard(s) identification

**Physical hazards** Not classified.

**Health hazards** Not classified.

**OSHA defined hazards** Not classified.

### Label elements

**Hazard symbol** None.

**Signal word** None.

**Hazard statement** None.

### Precautionary statement

**Prevention** Observe good industrial hygiene practices.

**Response** Get medical attention/advice if you feel unwell.

**Storage** Store as indicated in Section 7.

**Disposal** Dispose of in accordance with local, state, and federal regulations.

**Hazard(s) not otherwise classified (HNOC)** None known.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	CAS number	%
Calcium sulfate dihydrate (alternative CAS 10101-41-4)	13397-24-5	≥ 85
Cellulose	9004-34-6	< 10

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas.

The gypsum used to manufacture these panels contains respirable crystalline silica ranging up to 0.56 percent by weight, depending on source, as indicated by bulk sampling methods. Industrial hygiene testing using both personal and area sampling measured no detectable respirable crystalline silica when cutting the product by "score and snap," rotary saw, or circular saw. Good work practices which minimize the extent of dust generation should be followed.

## 4. First-aid measures

**Inhalation** Dust irritates the respiratory system, and may cause coughing and difficulties in breathing. Move injured person into fresh air and keep person calm under observation. Get medical attention if symptoms persist.

<b>Skin contact</b>	Contact with dust: Rinse area with plenty of water. Get medical attention if irritation develops or persists.
<b>Eye contact</b>	Dust in the eyes: Do not rub eyes. Flush thoroughly with water. If irritation occurs, get medical assistance.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Under normal conditions of intended use, this material does not pose a risk to health. Dust may irritate throat and respiratory system and cause coughing.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Use fire-extinguishing media appropriate for surrounding materials.
<b>Unsuitable extinguishing media</b>	Not applicable.
<b>Specific hazards arising from the chemical</b>	Not a fire hazard.
<b>Special protective equipment and precautions for firefighters</b>	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire-fighting equipment/instructions</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>Specific methods</b>	Cool material exposed to heat with water spray and remove it if no risk is involved.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	See Section 8 of the SDS for Personal Protective Equipment.
<b>Methods and materials for containment and cleaning up</b>	No specific clean-up procedure noted. For waste disposal, see Section 13 of the SDS.
<b>Environmental precautions</b>	Avoid discharge to drains, sewers, and other water systems.

## 7. Handling and storage

<b>Precautions for safe handling</b>	<p>Use work methods which minimize dust production. Avoid inhalation of dust and contact with skin and eyes. Wear appropriate personal protective equipment. Wash hands after handling. Observe good industrial hygiene practices. When moving board with a forklift or similar equipment, it is essential that the equipment be rated capable of handling the loads. The forks should always be long enough to extend completely through the width of the load. Fork spacing between supports should be one half the length of the panels or base being handled so that a maximum of 4' extends beyond the supports on either end.</p> <p>Follow traditional building practices; such as management of water away from the interior of the structure to avoid the growth of mold, mildew and fungus. Remove any building products suspected of being exposed to sustained moisture and considered conducive to mold growth from the job site. Gypsum panels are very heavy, awkward loads posing the risk of severe back injury. Use proper lifting techniques.</p>
<b>Conditions for safe storage, including any incompatibilities</b>	Store in a cool, dry, well-ventilated place. Store away from incompatible materials. Protect product from physical damage. Protect from weather and prevent exposure to sustained moisture. Gypsum Association literature (GA-801-07) recommends storing board flat to avoid damaging edges, warping the board and the potential safety hazards of the board falling over. However, in other situations, storing the board flat may cause a tripping hazard or exceed floor limit loads. If stacking board vertically, leave at least 4 inches from the wall to decrease the risk of falling board and no more than 6 inches to avoid too much lateral weight against the wall.



## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Calcium sulfate dihydrate (alternative CAS 10101-41-4) (CAS 13397-24-5)	PEL	5 mg/m3	Respirable fraction.
Cellulose (CAS 9004-34-6)	PEL	15 mg/m3 5 mg/m3 15 mg/m3	Total dust. Respirable fraction. Total dust.

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Calcium sulfate dihydrate (alternative CAS 10101-41-4) (CAS 13397-24-5)	TWA	10 mg/m3	Inhalable fraction.
Cellulose (CAS 9004-34-6)	TWA	10 mg/m3	

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Calcium sulfate dihydrate (alternative CAS 10101-41-4) (CAS 13397-24-5)	TWA	5 mg/m3	Respirable.
Cellulose (CAS 9004-34-6)	TWA	10 mg/m3 5 mg/m3 10 mg/m3	Total Respirable. Total

#### Biological limit values

No biological exposure limits noted for the ingredient(s).

#### Appropriate engineering controls

Provide sufficient ventilation for operations causing dust formation. Observe occupational exposure limits and minimize the risk of exposure.

#### Individual protection measures, such as personal protective equipment

##### Eye/face protection

Wear approved safety goggles.

##### Skin protection

##### Hand protection

It is a good industrial hygiene practice to minimize skin contact. For prolonged or repeated skin contact use suitable protective gloves.

##### Other

Normal work clothing (long sleeved shirts and long pants) is recommended.

##### Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH/MSHA approved air purifying respirator as needed to control exposure. Consult with respirator manufacturer to determine respirator selection, use, and limitations. Use positive pressure, air-supplied respirator for uncontrolled releases or when air purifying respirator limitations may be exceeded. Follow respirator protection program requirements (OSHA 1910.134 and ANSI Z88.2) for all respirator use. Observe any medical surveillance requirements.

##### Thermal hazards

None.

#### General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Observe any medical surveillance requirements.

## 9. Physical and chemical properties

#### Appearance

Paper faced with gypsum core.

##### Physical state

Solid.

##### Form

Panel.

##### Color

Gray to off-white.

#### Odor

Low to no odor.

#### Odor threshold

Not applicable.

<b>pH</b>	9 - 10
<b>Melting point/freezing point</b>	Not applicable.
<b>Initial boiling point and boiling range</b>	Not applicable.
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not applicable.
<b>Flammability limit - upper (%)</b>	Not applicable.
<b>Explosive limit - lower (%)</b>	Not applicable.
<b>Explosive limit - upper (%)</b>	Not applicable.
<b>Vapor pressure</b>	Not applicable.
<b>Vapor density</b>	Not applicable.
<b>Relative density</b>	2.32 (Gypsum) (H <sub>2</sub> O=1)
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	0.26 g/100 g (H <sub>2</sub> O)
<b>Partition coefficient (n-octanol/water)</b>	Not applicable.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Decomposition temperature</b>	2642 °F (1450 °C)
<b>Viscosity</b>	Not applicable.
<b>Other information</b>	
<b>Bulk density</b>	61 - 75 lb/ft <sup>3</sup>
<b>Particle size</b>	Varies.
<b>VOC (Weight %)</b>	0 %

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non reactive under normal conditions of storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents. Strong acids.
<b>Hazardous decomposition products</b>	Calcium oxides, carbon dioxide, and carbon monoxide.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Ingestion</b>	Not likely, due to the form of the product.
<b>Inhalation</b>	Mechanical processing may generate dust. Gypsum dust has an irritant action on mucous membranes of the upper respiratory tract and eyes (1).
<b>Skin contact</b>	Under normal conditions of intended use, this material does not pose a skin hazard. Gypsum was not found to be a skin irritant (2).
<b>Eye contact</b>	Mechanical processing may generate dust. Direct contact with eyes may cause temporary irritation (1).

**Symptoms related to the physical, chemical and toxicological characteristics** Under normal conditions of intended use, this material does not pose a risk to health.

### Information on toxicological effects

**Acute toxicity** Low hazard.

<b>Skin corrosion/irritation</b>	Gypsum was not found to be a skin irritant.
<b>Serious eye damage/eye irritation</b>	Gypsum does not cause serious eye damage or irritation.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	No data available, but based on results from the skin sensitization study, calcium sulfate is not expected to be a respiratory sensitizer.
<b>Skin sensitization</b>	Not a skin sensitizer (2).
<b>Germ cell mutagenicity</b>	No evidence of mutagenic potential exists (3,4,5).
<b>Carcinogenicity</b>	No evidence of carcinogenic potential exists (6).
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	
Not listed.	
<b>Reproductive toxicity</b>	No evidence of reproductive toxicity exists (2).
<b>Specific target organ toxicity - single exposure</b>	Not toxic to lung tissue.
<b>Specific target organ toxicity - repeated exposure</b>	Not toxic to lung tissue (6).
<b>Aspiration hazard</b>	Due to the physical form of the product it is not an aspiration hazard.
<b>Further information</b>	Pre-existing skin and respiratory conditions including dermatitis, asthma and chronic lung disease might be aggravated by exposure.

## 12. Ecological information

<b>Ecotoxicity</b>	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
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Components	Species	Test Results
Calcium sulfate dihydrate (alternative CAS 10101-41-4) (CAS 13397-24-5)		
<b>Aquatic</b>		
Fish	LC50	Fathead minnow (Pimephales promelas) > 1970 mg/l, 96 hours
<b>Persistence and degradability</b>	Not applicable for the salt of inorganic compounds. Calcium sulfate dissolves in water without undergoing chemical degradation.	
<b>Bioaccumulative potential</b>	Bioaccumulation is not expected.	
<b>Mobility in soil</b>	Calcium sulfate has a low potential for adsorption to soil. If water is applied, gypsum dissolves and the calcium and sulfate ions are mobile and penetrate the subsoil (7).	
<b>Other adverse effects</b>	None expected.	

## 13. Disposal considerations

<b>Disposal instructions</b>	Dispose in accordance with applicable federal, state, and local regulations. Recycle responsibly.
<b>Local disposal regulations</b>	Dispose of in accordance with local regulations.
<b>Hazardous waste code</b>	Not regulated.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations.
<b>Contaminated packaging</b>	Dispose of in accordance with local regulations.

## 14. Transport information

<b>DOT</b>	Not regulated as dangerous goods.
<b>IATA</b>	Not regulated as dangerous goods.
<b>IMDG</b>	Not regulated as dangerous goods.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable. This product is a solid. Therefore, bulk transport is governed by IMSBC code.

## 15. Regulatory information

**US federal regulations** This product is not hazardous according to OSHA 29CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - No  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**US state regulations**

**US. Massachusetts RTK - Substance List**

Calcium sulfate dihydrate (alternative CAS 10101-41-4) (CAS 13397-24-5)

Cellulose (CAS 9004-34-6)

**US. New Jersey Worker and Community Right-to-Know Act**

Calcium sulfate dihydrate (alternative CAS 10101-41-4) (CAS 13397-24-5)

Cellulose (CAS 9004-34-6)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Calcium sulfate dihydrate (alternative CAS 10101-41-4) (CAS 13397-24-5)

Cellulose (CAS 9004-34-6)

**US. Rhode Island RTK**

Not regulated.

**US. California Proposition 65**

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Not listed.

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

**Issue date** 30-July-2014

**Revision date** -

**Version #** 01

**Further information**

NFPA Ratings:

Health: 1

Flammability: 0

Physical hazard: 0

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

**NFPA ratings****List of abbreviations**

NFPA: National Fire Protection Association.

**References**

1. US National Library of Medicine (NLM) (1998). Hazardous Substances Data Bank (HSDB).
2. Tested by LG Life Science/Toxicology Center, Korea (2002). National Institute of Environmental Research (NIER).
3. Dopp E et al. (1995). Environ. Health Perspect. 103(3), 268-271.
4. Cremer H.H. et al. (1988). Wiss. Umwelt. 4, 202-205.
5. Fujita H et al. (1988). Kenkya Nenpo-Tokyo-Toritsu Eisei Kenkynsho. 39, 343-350.
6. Clouter et al. (1998). Inhal. Toxicol. 10, 3-14.
7. Shainberg et al. (1989). Advanced Soil Sci. 9, 1-111.

**Disclaimer**

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.



## Safety Data Sheet Conforms to HazCom 2012/ United States

### Section 1. Identification

GHS product Identifier : VM60 Sheet Membrane  
Other means of identification : Not available

Relevant identified used of the substance or mixtures and uses advised against

Polymer modified bitumen membrane for waterproofing applications.

Supplier's details American Hydrotech  
303 East Ohio Street  
Chicago, Illinois 60611  
Tel: (800) 877-6125 ( M-F 8 am – 5 pm CST.)  
Emergency telephone number) CHEMTREC, US 1-800-424-9300 International 1-703-527-3887  
with hours of operation) ( 24/7)

### Section 2. Hazards identification

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazardous Communications Standard ( 49CFR1910.1200) , this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Not classified

GHS label elements

Signal word : No signal word

Hazard statement : No known significant effects or critical hazards.

Precautionary statements

Prevention : Not applicable

Response : Not applicable

Storage : Not applicable

Disposal : Not applicable

Hazards not otherwise classified : None known

### Section 3. Composition/information on ingredients

Substance/Mixture : Mixture

Other means of identification : Not available

CAS number/other identifiers

CAS number : Not applicable

Product code : Not applicable

Occupational exposure limits, if available are listed in section 8.

### Section 4. First aid measures

Description of necessary first aid measures.

Eye contact Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if symptoms occur.

Inhalation Not likely to occur under normal use. Possible exposure to toxic fumes if burned.

Skin contact Wash with soap and water. Get medical attention if symptoms occur.

Ingestion Not likely to occur under normal use. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.

## Section 4. First aid measures

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

Eye contact	: No known significant effects or critical hazards
Inhalation	: No known significant effects or critical hazards
Skin contact	: No known significant effects or critical hazards
Ingestion	: No known significant effects or critical hazards

#### Over-exposure signs/symptoms

Eye contact	: No known significant effects or critical hazards
Inhalation	: No known significant effects or critical hazards
Skin contact	: No known significant effects or critical hazards
Ingestion	: No known significant effects or critical hazards

### Indication of immediate medical attention and special treatment needed, if necessary.

Notes to physician:	: No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatment
Protection of first-aiders:	: No action shall be taken involving any personal risk or without suitable training.

## Section 5. Fire-fighting measures

### Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known

Specific hazards arising from the chemical : No specific fire or explosion hazard.

Hazardous thermal decomposition products Decomposition products may include the following materials:

Carbon Dioxide  
Carbon Monoxide  
Sulfur oxides  
Low MW hydrocarbons

Special protective equipment : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face piece operated in a positive pressure mode.

Special protective actions for fire fighters : No special protection is required.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures.

For non emergency personal : Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.

Environmental precautions : Not applicable

### Methods and materials for containment and cleaning up

Spill : Due to the physical state of this material, spills are not possible.

## Section 7. Handling and storage

### Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment ( see Section 8)

Advice on general occupational hygiene Eating, drinking and smoking should be prohibited in areas where material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See section 8 for additional information on hygiene measures.

## Section 7. Handling and storage

### Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry cool and well-ventilated area away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready to use. Do not store in unlabeled containers.

## Section 8. Exposure controls/personal protection

### Control parameters

### Occupational exposure limits

### Appropriate engineering controls

### Environmental exposure controls

### Hygiene measure:

### Eye/face protection

### Skin Protection

### Hand protection

### Body protection

### Other skin protection

### Respiratory protection

None

: No special ventilation requirements. Good ventilation should be sufficient to control worker exposure to airborne contaminants.

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the work station location.

: Safety eyewear complying with an approved standard should be used when risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases and dusts.

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

: Use a properly fitted, particulate filter respiratory complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## Section 9. Physical and chemical properties

### Appearance

### Physical state

### Color

### Odor

### Odor threshold

### pH

### Melting point

### Boiling point

### Flash Point

### Burning time

### Burning rate

### Evaporation rate:

### Flammability(solid, gas)

### Lower & upper explosive (flammable) limits

### Vapor density

: Solid

: White

: Asphaltic (slight)

: Not available

: Not applicable

: Not available

: Not available

: Not determined

: Not determined

: Not determined

: Not applicable

: Not applicable

: Not applicable

: Not applicable



## 9. Physical and chemical properties

Vapor pressure	: Not applicable
Relative density	: 1.09
Solubility	: Insoluble in water
Partition coefficient: n-octanol/water	: Not available
Auto- ignition temperature	: Not applicable
Decomposition temperature	: Not applicable
SADT	: Not applicable
Viscosity	: Not applicable
VOC	: 0 g/l

## Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: This product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Conditions to avoid:	: No specific data.
Incompatible materials	: Reactive or incompatible with the following materials: Oxidizing materials
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

Acute toxicity : There is no data available

### Irritation/Corrosion

Skin : There is no data available

Eyes : There is no data available

Respiratory : There is no data available

### Sensitization

Skin : There is no data available

Respiratory : There is no data available

Mutagenicity : There is no data available

Carcinogenicity : There is no data available

Reproductive toxicity : There is no data available

Specific target organ toxicity : There is no data available

### ( single exposure)

Specific target organ toxicity : There is no data available

### ( repeated exposure)

Aspiration hazard : There is no data available

**Information on the likely routes of exposure** : Routes of entry anticipated: dermal  
: Routes of entry not anticipated: Oral, inhalation, ingestion

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards

**Inhalation** : No known significant effects or critical hazards

**Skin contact** : No known significant effects or critical hazards

**Ingestion** : No known significant effects or critical hazards

## Section 11. Toxicological information

### Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: No known significant effects or critical hazards
Inhalation	: No known significant effects or critical hazards
Skin contact	: No known significant effects or critical hazards
Ingestion	: No known significant effects or critical hazards

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

Potential immediate effects	: No known significant effects or critical hazards
Potential delayed effects	: No known significant effects or critical hazards

#### Long term exposure

Potential immediate effects	: No known significant effects or critical hazards
Potential delayed effects	: No known significant effects or critical hazards

#### Potential chronic health effects

General	: No known significant effects or critical hazards
Carcinogenicity	: No known significant effects or critical hazards
Mutagenicity	: No known significant effects or critical hazards
Teratogenicity	: No known significant effects or critical hazards
Developmental effects	: No known significant effects or critical hazards
Fertility effects	: No known significant effects or critical hazards
Target organs	: No known significant effects or critical hazards

### Numerical measures of toxicity

<u>Acute toxicity estimates</u>	: There is no data available
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## Section 12. Ecological information

<u>Toxicity</u>	: There is no data available
<u>Persistence and degradability</u>	: There is no data available
<u>Bioaccumulative potential</u>	: There is no data available
<u>Mobility in soil</u>	
Soil/water partition coefficient ( $K_{oc}$ )	: Not applicable
Other adverse effects	: No known significant effects or critical hazards

## Section 13. Disposal Considerations

Disposal methods	: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.
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## Section 14. Transportation information

AERG:	: Not applicable
Regulatory Information:	
DOT/MDG/ATA	: Not regulated

## Section 15. Regulatory information

<b>U.S. Federal regulations:</b>	<b>TSCA 8(a) CDR Exempt/Partial exemption:</b> Not determined
<b>Clean Air Act Section 112 (b) Hazardous air pollutants (HAPs)</b>	<b>United States inventory ( TSCA 8 b):</b> all components are listed or exempted : Not listed
<b>Clean Air Act (CAA) Section 602 Class I Substances</b>	: Not listed
<b>Clean Air Act (CAA) Section 602 Class II Substances</b>	: Not listed
<b>DEA List I Chemicals ( Precursor chemicals)</b>	: Not listed
<b>DEA List II Chemicals (Essential Chemicals)</b>	: Not listed
<b>SARA 302/304</b>	
<b><u>Composition/information on ingredients</u></b>	: No products found
<b>SARA 304 RQ</b>	: Not applicable
<b>SARA 311/312</b>	
<b>Classification</b>	: Not applicable
<b><u>State regulations</u></b>	
<b>Massachusetts</b>	: The following components are listed: Petroleum asphalt
<b>New Jersey</b>	: The following components are listed: Petroleum asphalt
<b>New York</b>	: None of the components are listed
<b>Pennsylvania</b>	: The following components are listed: Petroleum asphalt
<b><u>California Prop.65</u></b>	: No products were found
<b><u>International regulations</u></b>	
<b>International lists</b>	: Australia inventory ( AICS): all components are listed or exempted : China inventory ( IECSC): all components are listed or exempted : Japan inventory : Not determined : China inventory ( IECSC): All components are listed or exempted : Korea inventory: All components are listed or exempted : Malaysia inventory (EHS Register): Not determined : New Zealand Inventory of Chemicals ( NZIoC):All components are listed or exempted : Philippines inventory ( PICCS): all components are listed or exempted : Taiwan inventory (CSNN): Not determined
<b>Chemical Weapons Convention List schedule I Chemicals</b>	: Not listed
<b>Chemical Weapons Convention List schedule II Chemicals</b>	: Not listed
<b>Chemical Weapons Convention List schedule III Chemicals</b>	: Not listed

## 16. Other information

### Hazardous Material Information System ( USA)

**Health -1                                      Flammability-0                                      Physical hazards-0**

Caution: HMIS<sup>®</sup> ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS<sup>®</sup> ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS<sup>®</sup> ratings are to be used with fully implemented HMIS<sup>®</sup> program. HMIS<sup>®</sup> is a registered trademark of the National Paint & Coating Association (NPCA). HMIS<sup>®</sup> materials may be purchased exclusively from J.J. Keller.

### National Fire Protection Association ( USA) NFPA 704

**Health -1                                      Flammability-0                                      Instability-0**

NFPA-704 was copyrighted by the National Fire Protection Association of Quincy, MA. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactive hazards of chemicals. The user is referred to certain limited number of with recommended classifications in NFPA 49 and NFPA 325, which would be used as guidelines only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

**Date of revision:**                                      1/5/15

**Date of previous issue**                                      1/6/09

**Revisions:**                                      Revision to entire document for compliance of new HazCom rules.

**Version**                                      2

**Prepared by**                                      C. Rogalski

**Notice to reader: To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.**



## Safety Data Sheet

Conforms to HazCom 2012/ United States

### Section 1. Identification

**GHS product Identifier** : VM 60 Liquid Membrane Part A  
**Other means of identification** : Not available

**Relevant identified used of the substance or mixtures and uses advised against**

Used as a two part urethane waterproofing system.

**Supplier's details** American Hydrotech, Inc.  
303 East Ohio Street  
Chicago, Illinois 60611  
Tel (800) 877-6125 ( M-F 8 AM- 5 PM CST)  
**Emergency telephone number)** PERS #11540: 800-633-8253 ( 24/7)  
**with hours of operation)**

### Section 2. Hazards identification

**OSHA/HCS status** : While this material is not considered hazardous by the OSHA Hazardous Communications Standard (49CFR1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product .

**Classification of the substance or mixture** : Not classified

**GHS label elements**

**Signal word** : No signal words  
**Hazard statement** : No signal words

**Precautionary statements**

**Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear eye and face protection. Keep away from heat, sparks, open flames and hot surfaces. – No smoking. Keep container tightly closed. Use only outdoors or in a well- ventilated area. Avoid release to the environment. Do not breathe vapor. Wash hands thoroughly after handling.

**Response** : Collect spillage; Get medical attention if you feel unwell. If exposure or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. If SWALLOWED: Immediately call a POISON CENTER or physician. DO NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. If skin irritation occurs: Get medical attention.

**Storage** Store locked up. Store in a well-ventilated place. Keep cool.

**Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazards not otherwise classified** : None known

### Section 3. Composition/information on ingredients

Substance/Mixture	: Mixture
Other means of identification	: Not available
<u>CAS number/other identifiers</u>	
CAS number	: Not applicable
Product code	: Not applicable

Occupational exposure limits, if available , are listed in Section 8.

### Section 4. First aid measures

#### Description of necessary first aid measures.

Eye contact	: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.
Inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 20 minutes. Get medical attention if symptoms occur.
Ingestion	: Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personal. Get medical attention if symptoms occur.

#### Most important symptoms/effects, acute and delayed

##### Potential acute health effects

Eye contact	: No known or significant effects or critical hazards.
Inhalation	: No known or significant effects or critical hazards.
Skin contact	: No known or significant effects or critical hazards.
Ingestion	: No known or significant effects or critical hazards.

##### Over-exposure signs/symptoms

Eye contact	: Adverse symptoms may include the following: Pain or irritation, Watering, Redness.
Inhalation	: No known or significant effects or critical hazards.
Skin contact	: Adverse symptoms may include the following: Irritation Redness
Ingestion	: No known or significant effects or critical hazards.

#### Indication of immediate medical attention and special treatment needed, if necessary.

Notes to physician:	: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatment
Protection of first-aiders:	: No action shall be taken involving any personal risk or without suitable training.

### Section 5. Fire-fighting measures

#### Extinguishing media

Suitable extinguishing media	: Use an extinguisher agent suitable for the surrounding fire.
Unsuitable extinguishing media	: None known
Specific hazards arising from the chemical	: No specific fire or explosion hazard.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: Carbon Dioxide Carbon Monoxide

## Section 5. Fire-fighting measures

**Special protective equipment** : No special protection is required.

**Special protective actions for fire fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face piece operated in a positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures.

**For non emergency personal** : Put on appropriate personal protective equipment.

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel."

**Environmental precautions** : Avoid disposal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, or air).

### Methods and materials for containment and cleaning up

**Spill** : Stop leak if without risk. Move container from spill area. Use spark proof tools and explosion proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements, or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8).

**Advice on general occupational hygiene** Eating, drinking and smoking should be prohibited in areas where material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry cool and well-ventilated area away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready to use. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

None

#### **Appropriate engineering controls**

: No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

#### **Environmental exposure controls**

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

#### **Hygiene measure:**

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the work station location.

#### **Eye/face protection**

: Safety eyewear complying with an approved standard should be used when risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases and dusts.

### Skin Protection

#### **Hand protection**

: Chemical- resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

#### **Body protection**

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

#### **Other skin protection**

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

#### **Respiratory protection**

: Use a properly fitted, air purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## Section 9. Physical and chemical properties

### Appearance

#### **Physical state**

: Liquid

#### **Color**

: Black

#### **Odor**

: Asphalt

#### **Odor threshold**

: Not available

#### **pH**

: Not applicable

#### **Melting point**

: Not applicable

#### **Boiling point**

: Not available

#### **Flash Point**

: Open cup: 274 °C (525.5 °F)

#### **Burning time**

: Not applicable

#### **Burning rate**

: Not applicable

#### **Evaporation rate:**

: Not applicable

#### **Flammability(solid, gas)**

: Not available

#### **Lower & upper explosive (flammable) limits**

: Not available

#### **Vapor density**

: Not available

#### **Vapor pressure**

: Not available

#### **Relative density**

: 1.29

#### **Solubility**

: Partially soluble in the following materials: cold and hot water.



## Section 9. Physical and chemical properties

Partition coefficient: n-octanol/water	: Not available
Auto- ignition temperature	: 485 °C (905 °F)
Decomposition temperature	: Not available
SADT	: Not available
Viscosity	: 6,000-8,000 cps @ 250 °F
VOC	: 0 g/l

## Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: This product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Conditions to avoid:	: No specific data.
Incompatible materials	: Reactive or incompatible with the following materials: Oxidizing materials and acids.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

There is no data available.

#### Irritation/Corrosion

##### Skin

: There is no data available

##### Eyes

: There is no data available

##### Respiratory

: There is no data available

#### Sensitization

##### Skin

: There is no data available

##### Respiratory

: There is no data available

#### Mutagenicity

: There is no data available

#### Carcinogenicity

: There is no data available

#### Reproductive toxicity

: There is no data available

#### Teratogenicity

: There is no data available

#### Specific target organ toxicity ( single exposure)

There is no data available

#### Specific target organ toxicity ( repeated exposure)

There is no data available

## Section 11. Toxicological information

### Aspiration hazard

There is no data available

**Information on the likely routes of exposure** : Routes of entry anticipated: Oral, dermal, inhalation.

### Potential acute health effects

**Eye contact** : Causes eye irritation.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:  
Pain or irritation,  
Watering,  
Redness.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : Adverse symptoms may include the following:  
Irritation  
Redness

**Ingestion** : No known significant effects or critical hazards.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : No known significant effects or critical hazards.

**Potential delayed effects** : No known significant effects or critical hazards.

#### Long term exposure

**Potential immediate effects** : No known significant effects or critical hazards.

**Potential delayed effects** : No known significant effects or critical hazards.

### Potential chronic health effects

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

### Numerical measures of toxicity

**Acute toxicity estimates** : There is no data available

## Section 12. Ecological information

### Toxicity

There is no data available

Persistence and degradability : There is no data available.

Bio accumulative potential : There is no data available.

### Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : There is no data available.

Other adverse effects : No known significant effects or critical hazards

## Section 13. Disposal Considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recycled products via a licensed waste disposal contractor. Waste should not be disposed of to a sewer. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, water ways, drains and sewers.

## Section 14. Transportation information

	<b>DOT Classification</b>	<b>IMDG</b>	<b>IATA</b>
<b>UN Number</b>	Not regulated	Not regulated	Not regulated
<b>UN Proper Shipping Name</b>			
<b>Transportation hazard class(es)</b>			
<b>Packing Group</b>			
<b>Environmental Hazard</b>	No	No	No
<b>Additional Information</b>			

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transportation in bulk according to Annex II of MARPOL 73/78 and the IBC Code** : Not available

## Section 15. Regulatory information

**U.S. Federal regulations:** **TSCA 8(a) Pair:** Siloxanes and silicones, di-Me, reaction products with silica; 1-Cyclohexane, 4- vinyl-.  
**TSCA 8(a) CDR Exempt/Partial exemption:** Not determined.  
**United States inventory ( TSCA 8 b):** all components are listed or exempted

## Section 15. Regulatory information

Clean Air Act Section 112 (b) : Not listed  
 Hazardous air pollutants (HAPs)  
 Clean Air Act (CAA) Section 602 Class I Substances : Not listed  
 Clean Air Act (CAA) Section 602 Class II Substances : Not listed  
 DEA List I Chemicals ( Precursor chemicals) : Not listed  
 DEA List II Chemicals (Essential Chemicals) : Not listed  
 SARA 302/304  
Composition/information on ingredients : No products found  
 SARA 304 RQ : Not applicable  
 SARA 311/312  
 Classification : Not applicable

### Composition/information on ingredients

No products were found

SARA 313 : Not applicable

### State regulations

Massachusetts : The following components are listed: Limestone, Petroleum asphalt  
 New Jersey : The following components are listed: Limestone, Petroleum asphalt  
 New York : None of the components are listed: None of the components are listed.  
 Pennsylvania : The following components are listed: Limestone, Petroleum asphalt, Oxydipropanol.  
California Prop.65 : **Warning:** This product contains less than 0.1% of a chemical known to the state of California to cause cancer. This product contains less than 1% of a chemical known to the state of California to cause birth defects or other reproductive harm.

<b>Ingredient name</b>	<b>Cancer</b>	<b>Reproductive</b>	<b>No significant risk level</b>	<b>Maximum acceptable dosage level.</b>
1, 3- Butadiene	Yes	Yes	Yes	No
1-Cyclohexene,4-vinyl-	Yes	Yes	No	No

### International regulations

International lists : Australia inventory (AICS): All components are listed or exempted.  
 : China inventory (IECSC): All components are listed or exempted.  
 : Japan inventory : Not determined  
 : Korea inventory: All components are listed or exempted.  
 : Malaysia inventory (EHS Register): Not determined  
 : New Zealand Inventory of Chemicals ( NZIoC): All components are listed or exempted.  
 : Philippines inventory (PICCS): All components are listed or exempted.  
 : Taiwan inventory (CSNN): Not determined

Chemical Weapons : Not listed  
 Convention List schedule I  
 Chemicals  
 Chemical Weapons : Not listed  
 Convention List schedule II  
 Chemicals  
 Chemical Weapons : Not listed  
 Convention List schedule III  
 Chemicals

## 16. Other information

### Hazardous Material Information System ( USA)

**Health -0****Flammability-1****Physical hazards-0**

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with fully implemented HMIS® program. HMIS® is a registered trademark of the National Paint & Coating Association (NPCA). HMIS® materials may be purchased exclusively from J.J. Keller.

The customer is responsible for determining the PPE code for this material.

### National Fire Protection Association ( USA) NFPA 704

**Health -0****Flammability-1****Instability-0**

NFPA-704 was copyrighted by the National Fire Protection Association of Quincy, MA. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactive hazards of chemicals. The user is referred to certain limited number of with recommended classifications in NFPA 49 and NFPA 325, which would be used as guidelines only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

**Date of revision:****1/6/15****Date of previous issue****2/24/12****Revisions:****Revision to entire document for compliance of new HazCom rules.****Version****4****Prepared by****C. Rogalski**

**Notice to reader: To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.**



Conforms to HazCom 2012/ United States

# SAFETY DATA SHEET

## Section 1. Identification

**GHS product Identifier** : VM 60 Liquid Membrane Part B ( activator)  
**Other means of identification** : Not available

### Relevant identified used of the substance or mixtures and uses advised against

Component of a Polyurethane System

**Supplier's details** American Hydrotech, Inc.  
303 East Ohio Street  
Chicago, Illinois 60611  
Tel: (800) 877-6125 ( M-F 8 am to 5 pm CST)

**Emergency telephone number) with hours of operation)** PERS #11540: 800-633-8253 (24/7)

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazardous Communications Standard (49CFR1910.1200) .

**Classification of the substance or mixture** : Acute toxicity: Inhalation- Category 4  
Skin Corrosion/Irritation- Category 2  
Serious Eye Damage/Eye Irritation- Category 2B.  
Respiratory Sensitization- Category 1  
Skin Sensitization- Category 1  
Specific target organ toxicity ( single exposure) (Respiratory Tract irritation – Category 3

### GHS label elements Hazard pictogram



**Signal word** : Danger  
**Hazard statement** : Harmful if inhaled.  
Causes skin and eye irritation  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.  
May cause respiratory irritation.

### Precautionary statements Prevention

: Wear protective gloves. Wear eye or face protection. In case of inadequate ventilation wear respiratory protection. Use only outdoors or in well ventilated area. Avoid breathing vapor. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the work place.

## Section 2. Hazards identification

<b>Response</b>	: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. If experiencing respiratory symptoms: Call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. 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 attention.
<b>Storage</b>	: Store locked up. Store in a well-ventilated place. Keep cool.
<b>Disposal</b>	: Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Hazards not otherwise classified</b>	: None known

## Section 3. Composition/information on ingredients

<b>Substance/Mixture</b>	: Mixture
<b>Other means of identification</b>	: Not available

<b>Ingredient name</b>	<b>%</b>	<b>CAS Number</b>
4,4'-Methylenediphenyl diisocyanate	30-60	101-68-8
Isocyanic acid, polymethylenepolyphenylene ester	30-60	9016-87-9
Diphenylmethane-2,4'- diisocyanate	13-30	5873-54-1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.  
Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures.

<b>Eye contact</b>	: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
<b>Inhalation</b>	: Move exposed person to fresh air. Get medical attention immediately. Treatment is symptomatic for primary irritation or bronchospasm. If breathing is labored, oxygen should be administered by qualified personnel.
<b>Skin contact</b>	: After contact with skin, wash immediately with plenty of warm soapy water: Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. An MDI study has demonstrated that a polyglycol- based skin cleaner (such as D-Tam <sup>TM</sup> PEG-400) or corn oil may be more effective than soap and water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<b>Ingestion</b>	: Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Provided the patient is conscious, wash mouth out with water. Get medical attention if symptoms appear.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

<b>Eye contact</b>	: Causes eye irritation.
--------------------	--------------------------

## Section 4. First aid measures

<b>Inhalation</b>	: Harmful if inhaled. May cause respiratory irritation. This product is a respiratory irritant and potential respiratory sensitizer: repeated inhalation of vapors or aerosol at levels above the occupational exposure limit could cause respiratory sensitization. Symptoms may include dryness of the throat, tightness of chest and 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 sensitized persons. LC50 (rat): ca 490 mg/m <sup>3</sup> (4 hours): using experimentally produced respirable aerosol having aerodynamic diameter < 5 microns.
<b>Skin contact</b>	: Causes skin irritation. May cause sensitization by skin contact. 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.
<b>Ingestion</b>	: Low oral toxicity, but ingestion may cause irritation of the gastrointestinal tract.
<b><u>Over-exposure signs/symptoms</u></b>	
<b>Eye contact</b>	: Adverse symptoms may include the following: Pain or irritation, Watering, Redness.
<b>Inhalation</b>	: Adverse symptoms may include the following: Respiratory tract irritation coughing wheezing and breathing difficulties asthma
<b>Skin contact</b>	: Adverse symptoms may include the following: Irritation Redness
<b>Ingestion</b>	: No specific data
<b><u>Indication of immediate medical attention and special treatment needed, if necessary.</u></b>	
<b>Notes to physician:</b>	: Symptomatically treatment and supportive therapy as indicated. Following severe exposure the patient should be kept under medical review for at least 48 hours.
<b>Protection of first-aiders:</b>	: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing the aid to give mouth to mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

## Section 5. Fire-fighting measures

<b><u>Extinguishing media</u></b>	
<b>Suitable extinguishing media</b>	: Use CO <sub>2</sub> , foam or dry powder.
<b>Unsuitable extinguishing media</b>	: Water may be used if no other option is available and then do so in copious amounts. Reactions between water and hot isocyanate may be vigorous. Prevent washings from entering water courses, keep fire exposed containers cool by spraying with water.
<b>Specific hazards arising from the chemical</b>	: In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous thermal decomposition products</b>	: Decomposition products may include the following materials: Carbon Monoxide, Carbon Dioxide, nitrogen oxides, hydrocarbons and HCN.



## Section 5. Fire-fighting measures

- Special protective equipment for fire fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face piece operated in a positive pressure mode. PVC boots, gloves, safety helmet and protective clothing should be worn.
- Remark** : Due to reaction with water producing CO<sub>2</sub> gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. Containers may burst if overheated.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures.

- For non emergency personal** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk thru spilled material. Avoid breathing vapor or mist. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment( see section 8).
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel.
- Environmental precautions** : Avoid disposal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, or air).
- Methods and materials for containment and cleaning up** : If the product is in its solid form: Spilled MDI flakes should be picked up carefully. The area should be vacuum cleaned to remove remaining dust particles completely. If the product is in its liquid form: Absorb spillages onto sand, earth or any suitable adsorbant material. Leave to react for the at least 30 minutes. Shovel into open- top drums for further decontamination. Wash spillage area with water. Test atmosphere for MDI vapors. Neutralize small spillages with decontaminant. Remove and dispose of residues. The compositions of liquid decontaminates are given in section 16. Note: see section 1 for emergency contact information and section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling Protective measures

- Advice on general occupational hygiene** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure – obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on the skin or clothing. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in original container or an approved alternative made from compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous.
- : Eating, drinking and smoking should be prohibited in areas where material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See section 8 for additional information on hygiene measures.

## Section 7. Handling and storage

### Conditions for safe storage, including any incompatibilities

: Store in accordance with local regulations. Keep container tightly closed in a cool, well ventilated place. Keep away from moisture. Due to reaction with water producing CO<sub>2</sub> gas, a hazardous build-up of pressure could result if contaminated containers are resealed. Do not reseal contaminated containers. Uncontaminated containers, free of moisture, may be resealed only after placing under a nitrogen blanket. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Unsuitable containers: Do not store in containers made of copper, copper alloys or galvanized surfaces.

## Section 8. Exposure controls/personal protection

### Control parameters

### Occupational exposure limits

Ingredient name	Exposure limits
4,4'-Methylenediphenyl diisocyanate	<b>ACGIH TLV ( United States, 3/2012)</b> TWA: 0.005 ppm 8 hours <b>OSHA PEL ( United States, 6/2010)</b> CEIL: 0.02 ppm CEIL: 30.2 mg/m <sup>3</sup>

### Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Diisocyanates can only be smelled if occupational exposure limits have been exceeded considerably. Medical supervision of all employees who handle or come in contact with respiratory sensitizers is recommended. Personnel with a history of asthma-type conditions, bronchitis or skin sensitization conditions should not work with MDI based products. The Occupational Exposure Limits listed do not apply to previously sensitized individuals. Sensitized individuals should be removed from any further exposure.

### Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Hygiene measure:

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the work station.

### Eye/face protection

: Safety eyewear complying with an approved standard should be used when risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases and dusts.

## Section 8. Exposure controls/personal protection

### Skin Protection

#### Hand protection

: Use chemical resistant gloves classified under standard EN374: protective gloves against chemicals and microorganisms. Examples of glove material that might provide suitable protection include: Butyl rubber, Chlorinated polyethylene, Polyethylene, Ethyl vinyl alcohol copolymers laminated ("EVAL"), Polychloroprene (Neoprene\*), Nitrile/butadiene rubber ("nitrile" or "NBR"), Polyvinyl chloride ("PVC" or "vinyl"), Fluoroelastomer ("Viton")

When prolonged or frequent repeated contact may occur, a glove with protection class 5 or higher (breakthrough time is greater than 240 minutes according to EN 374) is recommended.

Contaminated gloves should be decontaminated and disposed of.

Notice: The selection of a specific glove for a particular application and duration of use in the workplace should also take into account all requisite workplace factors such as, but not limited to: other chemicals that may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), as well as instructions/specifications provided by the glove manufacturer. Protective gloves should be worn when handling freshly made polyurethane products to avoid contact with trace residual materials which may be hazardous in contact with skin.

#### Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: Overall (preferably heavy cotton) or Tyvek-Pro Tech "C", Tyvek-Pro "F" disposable coverall.

#### Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

#### Respiratory protection

: Use a properly fitted, air purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

#### Thermal hazards

: Not available

## Section 9. Physical and chemical properties

### Appearance

#### Physical state

: Liquid

#### Color

: Not available

#### Odor

: Not available

#### Odor threshold

: Not available

#### pH

: Not applicable

#### Melting point

: Not applicable

#### Boiling point

: > 300 °C ( 572 °F)

#### Flash Point

: Closed cup: >110 °C ( >230 °F) [Setaflash]

#### Evaporation rate:

: Not available

#### Flammability(solid, gas)

: Not applicable

#### Lower & upper explosive (flammable) limits

: Not available

#### Vapor density

: Not available

#### Vapor pressure

: Not available

#### Relative density

: Not available

#### Solubility

: Not available

#### Partition coefficient: n-octanol/water

: Not available

#### Auto-ignition temperature

: >600 °C ( >1112 °F)

#### Decomposition temperature

: Not available

#### VOC

: Not available

#### Viscosity

: Not Available

## Section 10. Stability and reactivity

### Reactivity Chemical stability Possibility of hazardous reactions

: No specific test data related to reactivity available for this product or its ingredients.  
: Stable at room temperature.  
: Reaction with water (moisture) produces CO<sub>2</sub> – gas. Exothermic reaction with materials containing active hydrogen groups. The reaction becomes progressively more vigorous and can be violent at higher temperatures if miscibility of the reaction partners is good or is supported by the presence of solvents. MDI is insoluble with and heavier than water and sinks to the bottom but reacts slowly at the interface. A solid water-insoluble layer of polyurea is formed at the interface by liberating carbon dioxide gas.

### Conditions to avoid: Incompatible materials Hazardous decomposition products

: Avoid high temperatures.  
: Water, alcohols, amines, bases and acids.  
: Combustion products may include: Carbon oxides (CO, CO<sub>2</sub>), nitrogen oxides (NO, NO<sub>2</sub>, etc.), hydrocarbons and HCN.

## Section 11. Toxicological information

### Information on toxicological effects Acute toxicity

Product/ingredient name	Test	Endpoint	Species	Result
4,4'-Methylenediphenyl diisocyanate	OECD 403 Acute Inhalation Toxicity	LC50 Inhalation Dusts and mists	Rat- Male, Female	0.49 mg/l
	OECD 402 Acute Dermal Toxicity	LD50 Dermal	Rabbit- Male Female	>9400 mg/kg
	OECD 401 Acute Oral Toxicity	LD50 Oral	Rat- Male	>10000 mg/kg
Isocyanic acid, polymethylenepolyphenylene ester	OECD 403 Acute Inhalation Toxicity	LC50 Inhalation Dusts and mists	Rat- Male, Female	0.49 mg/l
	OECD 402 Acute Dermal Toxicity	LD50 Dermal	Rabbit- Male Female	>9400 mg/kg
	OECD 401 Acute Oral Toxicity	LD50 Oral	Rat- Male	>10000 mg/kg
Diphenylmethane-2,4'-diisocyanate	—	LC50 Inhalation Dusts and mists	Rat	0.49 mg/l
	OECD 402 Acute Dermal Toxicity	LD50 Dermal	Rabbit- Male Female	>9400 mg/kg
	No official guidelines	LD50 Intraperitoneal	Rabbit- Male	100 mg/kg

### Conclusion/Summary

4, 4'-Methylenediphenyl diisocyanate Irritating to the respiratory system.

### Irritation/Corrosion

Product/ingredient name	Test	Species	Result
4,4'-Methylenediphenyl diisocyanate	OECD 404 Acute Dermal Irritation/Corrosion	Rabbit	Skin- Irritant
	OECD 405 Acute Eye Irritation/Corrosion	Rabbit	Eyes- Non-irritant
Isocyanic acid, polymethylenepolyphenylene ester	OECD 404 Acute Dermal Irritation/Corrosion	Rabbit	Skin- Mild irritant
	OECD 405 Acute Eye Irritation/Corrosion	Rabbit	Eyes- Non-irritant
Diphenylmethane-2,4'-diisocyanate	OECD 404 Acute Dermal Irritation/Corrosion	Rabbit	Skin- Mild irritant
	OECD 405 Acute Eye Irritation/Corrosion	Rabbit	Eyes- Non-irritant

## Section 11. Toxicological information

### Conclusions/Summary

#### Skin

: 4,4'-Methylenediphenyl diisocyanate Irritating to the skin

Isocyanic acid, Irritating to the skin

polymethylenepolyphenylene ester

Diphenylmethane-2,4'- diisocyanate Irritating to the skin

Isocyanic acid, Irritating to the skin

polymethylenepolyphenylene ester

#### Eyes

: 4,4'-Methylenediphenyl diisocyanate Based on the human occupational exposure data, this substance is considered as irritating to eyes.

Isocyanic acid, Based on the human occupational exposure data, this substance is considered as irritating to eyes.

polymethylenepolyphenylene ester Based on the human occupational exposure data, this substance is considered as irritating to eyes.

Diphenylmethane-2,4'- diisocyanate No additional information

#### Respiratory

: 4,4'-Methylenediphenyl diisocyanate No additional information

Isocyanic acid, No additional information

polymethylenepolyphenylene ester No additional information

Diphenylmethane-2,4'- diisocyanate No additional information

### Sensitization

Product/ingredient name	Test	Route of exposure	Species	Result
4,4'-Methylenediphenyl diisocyanate	OECD 429 Skin Sensitization: Local Lymph Node Assay	Skin	Mouse	Sensitizing
	OECD 406 Skin Sensitization:	Skin	Guinea pig	Not sensitizing
	No official guidelines	Respiratory	Guinea pig	Sensitizing
Isocyanic acid, polymethylenepolyphenylene ester	OECD 406 Skin Sensitization:	Skin	Guinea pig	Not sensitizing
	No official guidelines	Respiratory	Rat	Sensitizing
	-	Skin	Guinea pig	Sensitizing
Diphenylmethane-2,4'- diisocyanate	-	Skin	Mouse	Sensitizing
	No official guidelines	Respiratory	Guinea pig	Sensitizing

### Mutagenicity

Product/ingredient name	Test	Result
4,4'-Methylenediphenyl diisocyanate	Experiment: In vitro Subject: Bacteria Metabolic activation: +/-	Negative
	Experiment: In vitro Subject: Mammalian- Animal	Negative
Isocyanic acid, polymethylenepolyphenylene ester	Experiment: In vitro Subject: Bacteria Metabolic activation: +/-	Negative
	Experiment: In vitro Subject: Mammalian- Animal	Negative
	Experiment: In vitro Subject: Mammalian- Human	Equivocal
	Experiment: In vitro Subject: Bacteria Metabolic activation: +/-	Negative
Diphenylmethane-2,4'- diisocyanate	Experiment: In vitro Subject: Bacteria Metabolic activation: +/-	Negative
	Experiment: In vitro Subject: Mammalian- Animal	Negative

## Section 11. Toxicological information

### Conclusions/Summary

: 4,4'-Methylenediphenyl diisocyanate No Mutagenic effect  
 Isocyanic acid, No Mutagenic effect  
 polymethylenepolyphenylene ester

### Carcinogenicity

Product/ingredient name	Test	Species	Dose	Exposure	Result/Result type
4,4'-Methylenediphenyl diisocyanate	OECD 453 Combined Chronic Toxicity/ Carcinogenicity Studies	Rat-Male, Female	1 mg/m <sup>3</sup>	2 years; 5 days per week	Positive- Inhalation-NOAEL
Isocyanic acid, polymethylenepolyphenylene ester	OECD 453 Combined Chronic Toxicity/ Carcinogenicity Studies	Rat-Male, Female	1 mg/m <sup>3</sup>	2 years; 5 days per week	Negative- Inhalation-NOAEL
Diphenylmethane-2,4'-diisocyanate	OECD 453 Combined Chronic Toxicity/ Carcinogenicity Studies	Rat-Male, Female	1 mg/m <sup>3</sup>	2 years; 5 days per week	Positive- Inhalation-NOAEL

### Carcinogenic class

Product/ingredient name	IARC	OSHA
4,4'-Methylenediphenyl diisocyanate	3	-
Isocyanic acid, polymethylenepolyphenylene ester	3	-

### Reproductive Toxicity

Product/ingredient name	Test	Species	Maternal toxicity	Fertility	Developmental effects
Isocyanic acid, polymethylenepolyphenylene ester	OECD 414 Prenatal Developmental Toxicity Study	Rat- Male, Female	Negative	Negative	Negative
Diphenylmethane-2,4'-diisocyanate	OECD 414 Prenatal Developmental Toxicity Study	Rat-Female	Negative	-	-
	OECD 414 Prenatal Developmental Toxicity Study	Rat- Male, Female	Negative	-	-
	OECD 414 Prenatal Developmental Toxicity Study	Rat- Male, Female	Negative	Negative	Negative

### Conclusions/Summary

: 4,4'-Methylenediphenyl diisocyanate No known significant effects or critical hazards  
 : Isocyanic acid, No known significant effects or critical hazards  
 polymethylenepolyphenylene ester

## Section 11. Toxicological information

### Teratogenicity

Product/ingredient name	Test	Species	Result/Result type
4,4'-Methylenediphenyl diisocyanate	OECD 414 Prenatal Developmental Toxicity Study	Rat- Female	Negative- Inhalation
Isocyanic acid, polymethylenepolyphenylene ester	OECD 414 Prenatal Developmental Toxicity Study	Rat- Male, Female	Negative- Inhalation
Diphenylmethane-2,4'- diisocyanate	OECD 414 Prenatal Developmental Toxicity Study	Rat- Male, Female	Negative- Inhalation

### Conclusions/Summary

: 4,4'-Methylenediphenyl diisocyanate No known significant effects or critical hazards  
 : Isocyanic acid, polymethylenepolyphenylene ester No known significant effects or critical hazards

### Specific target organ toxicity( single exposure)

Product/ingredient name	Test	Route of exposure	Result/Result type
4,4'-Methylenediphenyl diisocyanate	Category 3	Not applicable	Respiratory tract irritation
Isocyanic acid, polymethylenepolyphenylene ester	Category 3	Not applicable	Respiratory tract irritation
Diphenylmethane-2,4'- diisocyanate	Category 3	Not applicable	Respiratory tract irritation

### Specific target organ toxicity( repeated exposure)

Not available

### Aspiration hazard

Not available

Information on the likely routes of exposure: : Not available

### Potential acute health effects

#### Eye contact

#### Inhalation

: Causes eye irritation  
 : Harmful if inhaled. May cause respiratory irritation. This product is a respiratory irritant and potential respiratory sensitizer: repeated inhalation of vapors or aerosol at levels above the occupational exposure limit could cause respiratory sensitization. Symptoms may include dryness of the throat, tightness of chest and 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 sensitized persons. LC50 (rat): ca 490 mg/m<sup>3</sup> (4 hours): using experimentally produced respirable aerosol having aerodynamic diameter < 5 microns.



- Skin contact** : Causes skin irritation. May cause sensitization by skin contact. 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.
- Ingestion** : Low oral toxicity, but ingestion may cause irritation of the gastrointestinal tract.

## Section 11. Toxicological information

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:  
Pain or irritation,  
Watering,  
Redness.
- Inhalation** : Adverse symptoms may include the following:  
Respiratory tract irritation  
coughing  
wheezing and breathing difficulties  
asthma
- Skin contact** : Adverse symptoms may include the following:  
Irritation  
Redness
- Ingestion** : No specific data

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : Not available

**Potential delayed effects** : Not available

#### Long term exposure

**Potential immediate effects** : Not available

**Potential delayed effects** : Not available

### Potential chronic health effects

Product/ingredient name	Test	Endpoint	Species	Result
Isocyanic acid, polymethylenepolyphenylene ester	OECD 453 Combined Chronic Toxicity /Carcinogenicity Studies	Chronic NOEC Inhalation Dusts and mists	Rat- Male, Female	0.2 mg/m <sup>3</sup>

- General** : May cause damage to organs through prolonged or repeated exposure if inhaled. Once sensitized a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : Rats have been exposed for two years to a respirable aerosol of polymeric MDI which resulted in chronic pulmonary irritation at high concentrations. Only at the top level (6 mg/m<sup>3</sup>), 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/m<sup>3</sup> and no effects at 0.2 mg/m<sup>3</sup>. Overall, the tumor incidences, both benign and malignant, and the number of animals with the tumors were not different from the controls. The increased incidence of lung tumors is associated with prolonged respiratory irritation and the 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.
- : No known significant effects or critical hazards



**Mutagenicity**  
**Teragenicity**  
**Developmental effects**

: No known significant effects or critical hazards  
 : No birth defects were seen in two independent animal (rat) studies. Fetotoxicity was observed at doses that were extremely toxic (including lethal) to the mother. Fetotoxicity was not observed at doses that were not maternally toxic. The doses used in these studies were maximal, respirable concentrations, which are well in excess of defined occupational exposure limits.

**Fertility effects**  
**Numerical measures of toxicity**

: No known significant effects or critical hazards

Route	ATE Value
Inhalation (dusts and mists)	1.5 mg/l

**Other information** : Not available

## Section 12. Ecological information

**Toxicity**

Product/ingredient name	Test	Endpoint	Exposure	Species	Result
4,4'-Methylenediphenyl diisocyanate	OECD 202 Daphnia sp. Acute Immobilization Test	Acute EC 50	24 hours static	Daphnia	>1000 mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute LC 50	96 hour static	Fish	> 1000 mg/l
	OECD 211 Daphnia Magna Reproduction Test	Chronic NOEC	21 days Semi-static	Daphnia	>=10 mg/l
	OECD 201 Alga, Growth Inhibition test	Chronic NOECr	72 hours static	Algae	1640 mg/l
Isocyanic acid, polymethylenepolyphenylene ester	OECD 201 Alga, Growth Inhibition test	Acute EC 50	72 hours static	Algae	> 1640 mg/l
	OECD 209 Activated sludge, Respiration Inhibition test	Acute EC 50	3 hours static	Bacteria	> 100 mg/l
	OECD 202 Daphnia sp. Acute Immobilization Test	Acute EC 50	24 hours static	Daphnia	>1000 mg/l
	-	Acute LC 0	96 hour static	Fish	> 1000 mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute LC 50	96 hour static	Fish	> 1000 mg/l
	OECD 211 Daphnia Magna Reproduction Test	Chronic NOEC	21 days Semi-static	Daphnia	>=10 mg/l
Diphenylmethane-2,4'-diisocyanate	OECD 201 Alga, Growth Inhibition test	Chronic NOECr	72 hours static	Algae	1640 mg/l
	OECD 209 Activated sludge, Respiration Inhibition test	Acute EC 50	3 hours static	Bacteria	> 100 mg/l
	OECD 202 Daphnia sp. Acute Immobilization Test	Acute EC 50	24 hours static	Daphnia	>1000 mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute LC 50	96 hour static	Fish	> 1000 mg/l
Diphenylmethane-2,4'-diisocyanate	OECD 211 Daphnia Magna Reproduction Test	Chronic NOEC	21 days Semi-static	Daphnia	>=10 mg/l

## Section 12. Ecological information

### Persistence and degradability

Product/ingredient name	Test	Period	Result
4,4'-Methylenediphenyl diisocyanate	OECD 302 C Inherent Biodegradability: Modified MITI Test ( II)	28 days	0 %
Isocyanic acid, polymethylenepolyphenylene ester	OECD 302 C Inherent Biodegradability: Modified MITI Test ( II)	28 days	0 %
Diphenylmethane-2,4'-diisocyanate	OECD 302 C Inherent Biodegradability: Modified MITI Test ( II)	28 days	0 %

### Conclusion/summary

4,4'-Methylenediphenyl diisocyanate Not biodegradable  
 Isocyanic acid, polymethylenepolyphenylene ester Not biodegradable

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
4,4'-Methylenediphenyl diisocyanate	Fresh Water 0.83 days	-	Not readily
Isocyanic acid, polymethylenepolyphenylene ester	Fresh Water 0.83 days	-	Not readily
Diphenylmethane-2,4'-diisocyanate		-	Not readily

### Bioaccumulation potential

Product/ingredient name	Log P <sub>ow</sub>	BCF	Potential
4,4'-Methylenediphenyl diisocyanate	4.51	200	low
Isocyanic acid, polymethylenepolyphenylene ester	-	200	low
Diphenylmethane-2,4'-diisocyanate	4.51	200	low

### Mobility in soil

#### **Mobility**

: By considering the production and use of the substance, it is unlikely that significant environmental exposure in the air or water will arise. Immiscible with water, but will react with water to produce inert and non-biodegradable solids. Conversion to soluble products, including diamino-diphenylmethane (MDA), is very low under the optimal laboratory conditions of good dispersion and low concentration. In the air, the predominant degradation process is predicted to be a relatively rapid OH radical attack, by calculation and by analogy with related diisocyanates.

#### **Other adverse effects**

: No known significant effects or critical hazards.

### Other ecological information

**BOD<sub>5</sub>** : Not determined.  
**COD** : Not determined.  
**TOC** : Not determined.

## Section 13. Disposal considerations

### Disposal methods


: The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non- recyclable product via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the regulations of environmental protection and waste disposal legislation and any regional local authority requirements. A void dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, local, national and local laws and regulations.

## Section 14. Transport information

### Proper shipping name

DOT : Other regulated substance, Liquid, N.O.S. ( Methylene Diphenyl Diisocyanate)  
 TDG : Not regulated  
 IMDG : Not regulated  
 IATA : Not regulated

Regulatory information	UN number	Classes	PG*	Label	Additional information
DOT	NA3082	9	III		<b>Reportable quantity 5000 lbs (2270 kg)</b> Single containers less than 5,000 lbs are not regulated.
TDG	Not regulated	-	-	-	-
IMDG	Not regulated	-	-	-	-
IATA	Not regulated	-	-	-	-

PG\*: Packing group

## Section 15. Regulatory information

### Safety, health and environmental regulations specific for the product

#### United States Regulations

TSCA 8(b) inventory : All components are listed or exempted.  
 TSCA 5(a)2 final significant new use rule ( SNUR) : No ingredients listed.  
 TSCA 5(e) substance consent order : No ingredients listed.  
 TSCA 12(b) export notification : No ingredients listed.  
 SARA 311/312 : Immediate (acute) health hazard.

#### Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)

#### Product name

4,4'-Methylenediphenyl diisocyanate

#### Concentrations %

48.5-54

#### Clean Air Act- Ozone Depleting Substances (ODS)

: This product does not contain nor is it manufactured with ozone depleting substances.

## Section 15. Regulatory information

SARA 313 Form R- Reporting requirements	<u>Product name</u>	<u>Concentrations %</u>			
	4,4'-Methylenediphenyl diisocyanate	48.8-54			
	Isocyanic acid, polymethylenepolyphenylene ester	30.899-37.199			
	Diphenylmethane-2,4'-diisocyanate	12.4-16.7			
<u>CERCLA Hazardous Substance</u>	<u>Ingredient name</u>	<u>%</u>	<u>Section 304 CERCLA Hazardous Substance</u>	<u>CERCLA Reportable Quantity ( Lbs)</u>	<u>Product Reportable Quantity ( Lbs)</u>
	Diphenylmethane-2,4'-diisocyanate	54	Listed	5000	9259

### State Regulations

#### Pennsylvania- RTK

: 4,4'-Methylenediphenyl diisocyanate  
 : This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

#### California Prop 65

## Section 16. Other information

### Hazardous Material Information System ( USA)

#### **Health -2\***

#### **Flammability-1**

#### **Physical hazards-1**

Caution: HMIS® rating are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with fully implemented HMIS® program. HMIS® is a registered trademark of the National Paint & Coating Association (NPCA). HMIS® materials may be purchased exclusively from J.J. Keller.

### National Fire Protection Association ( USA) NFPA 704

#### **Health -2**

#### **Flammability-1**

#### **Instability-1**

#### **Special- N/A**

NFPA-704 was copyrighted by the National Fire Protection Association of Quincy, MA. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactive hazards of chemicals. The user is referred to certain limited number of with recommended classifications in NFPA 49 and NFPA 325, which would be used as guidelines only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

**Date of revision** : 5/8/15

**Date of previous issue** : 2/24/12

**Revisions:** : Revision to entire document for compliance of new HazCom rules.

**Version** : 4

**Prepared by** : C. Rogalski

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



## Safety Data Sheet Conforms to HazCom 2012/ United States

### Section 1. Identification

**GHS product Identifier** : VM Mastic Seal  
**Other means of identification** : Not available

**Relevant identified uses of the substance or mixtures and uses advised against**

VM 60 Mastic is an integral part of the waterproofing system.

**Supplier's details** American Hydrotech  
303 East Ohio Street  
Chicago, Illinois  
Tel: (800) 877-6125 (M-F 8 am- 5 pm CST)  
**Emergency telephone number)** PERS #11540: 800-633-8253 (24/7)  
**with hours of operation)**

### Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazardous Communications Standard (49CFR1910.1200) .

**Classification of the substance or mixture** : Flammable liquid- Category 3  
Skin Irritation- Category 2  
Eye irritation- Category 2  
Target organ toxicity, repeat exposure- Category 2

**GHS label elements**  
**Hazard pictogram**



**Signal word** : **Warning**  
**Hazard statement** : Flammable liquid and vapor  
Causes skin irritation  
Causes eye irritation.  
May cause damage to organs through prolonged or repeated exposure.

**Precautionary statements**  
**Prevention**

: Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing, eye protection and face protection. Keep away from heat, sparks, open flames and hot surfaces and other ignition sources.— No smoking. Use explosion- proof electrical and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Ground and bond container and receiving equipment. Do not breathe vapor. Wash exposed areas thoroughly after handling. Do not eat, drink or smoke when using this product.

## Section 2. Hazards identification

- Response** : In CASE OF FIRE: Use carbon dioxide (CO<sub>2</sub>), alcohol foam, water fog or dry chemical to extinguish. DO NOT use stream/jet of water as this will spread the fire. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Specific treatment: Apply hand or body lotion to reduce irritation. If skin irritation occurs: Get medical advice or attention. Take off contaminated clothing and wash before reuse. 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 and/or attention. DO NOT induce vomiting. Get medical advice/attention if you feel unwell.
- Storage** : Store locked up. Store in a well-ventilated place. Keep container tightly closed.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Hazards not otherwise classified** : Not applicable.

## Section 3. Composition/information on ingredients

- Substance/Mixture** : Mixture
- Other means of identification** : Not available
- CAS number/other identifiers**
- CAS number** : Not applicable
- Product code** : Not applicable

<b>Ingredient name</b>	<b>%</b>	<b>CAS Number</b>
Stoddard Solvent	5-25	8052-41-3
Asphalt	30-60	8052-42-4
Aromatic Naphtha	1-10	64742-95-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures.

- Eye contact** : Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so and continue rinsing. If eye irritation persists; Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if you feel unwell. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention.
- Skin contact** : Remove immediately all contaminated clothing and wash before reuse. Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.

## Section 4. First aid measures

**Ingestion** : IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Get medical advice and/or attention if you feel unwell.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

#### Potential acute health effects

#### **Eye contact**

: Symptoms may include stinging, tearing, redness, swelling and blurred vision.

#### **Inhalation**

: Prolonged or repeated exposure may cause chronic effects.

#### **Skin contact**

: May cause redness, itching and /or pain.

### Indication of immediate medical attention and special treatment needed, if necessary.

Provide general supportive measures and treat symptomatically.

## Section 5. Fire-fighting measures

### Extinguishing media

**Suitable extinguishing media** : Use carbon dioxide (CO<sub>2</sub>), alcohol foam, water spray (fog) or dry chemical to extinguish.

#### **Unsuitable extinguishing media**

: Do not use stream or jet of water as this will spread fire.

#### **Specific hazards arising from the chemical**

: Vaporized material may form explosive mixture in air.

#### **Hazardous thermal decomposition products**

: Thermal decomposition (burning) will produce oxides of carbon including carbon monoxide and may also produce irritating, corrosive and/or toxic gases, vapors and fumes.

#### **Special protective actions for fire fighters**

: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full-face piece operated in a positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures.

**For non emergency personal** : Evacuate surrounding area. Keep unnecessary and unprotected personnel from entering. Shut off all ignition sources. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel."

**Environmental precautions** : Avoid disposal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, or air).

## Section 6. Accidental release measures

### Methods and materials for containment and cleaning up

#### **Spill**

: Stop leak if without risk. Move container from spill area. Use spark proof tools and explosion proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements, or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

#### **Protective measures**

: Put on appropriate personal protective equipment (see Section 8). Do not handle until safety precautions have been read and understood. Do not get in eyes or on the skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage area or confined spaces unless adequately ventilated. Keep in original container or an approved alternative made from compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flames and any other ignition source. Use explosion-proof electrical (ventilation, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

#### **Advice on general occupational hygiene**

: Eating, drinking and smoking should be prohibited in areas where material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See section 8 for additional information on hygiene measures.

#### **Conditions for safe storage, including any incompatibilities**

: Store in accordance with local regulations. Store in segregated and approved area. Store in original container protected from direct sunlight in a dry cool and well-ventilated area away from incompatible materials (see section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready to use. Do not store in unlabeled containers.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

<b>Ingredient name</b>	<b>Exposure limits</b>
<b>Petroleum Distillate</b>	<b>OSHA PEL-TWA</b> TWA: 500 ppm <b>ACGIH TLV -TWA</b> TWA: 100 ppm



## Section 8. Exposure controls/personal protection

<b>Appropriate engineering controls</b>	: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
<b>Environmental exposure controls</b>	: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.
<b>Hygiene measure:</b>	: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the work station location.
<b>Eye/face protection</b>	: Safety eyewear complying with an approved standard should be used when risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases and dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: Chemical splash goggles/ Face shield.
<b><u>Skin Protection</u></b>	
<b>Hand protection</b>	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
<b>Body protection</b>	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
<b>Other skin protection</b>	: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
<b>Respiratory protection</b>	: Use a properly fitted, air purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## Section 9. Physical and chemical properties

<b><u>Appearance</u></b>	
<b>Physical state</b>	: Paste
<b>Color</b>	: Black
<b>Odor</b>	: Mild Petroleum Odor
<b>Odor threshold</b>	: Not determined
<b>pH</b>	: Not applicable
<b>Melting point</b>	: Not determined
<b>Boiling point</b>	: > 350 ° F (>177 ° C)
<b>Flash Point</b>	: >105 ° F (>40 ° C) component with lowest PMCC flash point
<b>Evaporation rate</b>	: Not determined
<b>Lower &amp; upper explosive (flammable) limits</b>	: Lower: 0.8% Upper: 6%
<b>Vapor density</b>	: >1
<b>Vapor pressure @ 20 ° C</b>	: < 3 mm Hg, based on solvent

## Section 9. Physical and chemical properties

Specific Gravity, 16 °C	: > 1.0
Solubility	: Very slight
Partition coefficient: n-octanol/water	: Not determined
Auto- ignition temperature	: >410 °F (>210 °C)
Decomposition temperature	: Not determined
Viscosity	: Time, temperature and shear dependent
VOC	: 300 g/l

## Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: This product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Conditions to avoid:	: Avoid all possible sources of ignition (spark or flame) and strong oxidizing agents.
Incompatible materials	: Reactive or incompatible with the following materials: Strong oxidizing agents.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced. Combustion products: Oxides of carbon, nitrogen and sulfur and potentially irritating and/or toxic fumes.

## Section 11. Toxicological information

### Information on toxicological effects

Product/ingredient name	Result	Species	Dose	Exposure
Petroleum Distillates	LD50 Oral	Rat	>5 gm/Kg	-
	LC50 Oral	Rat	> 5500 mg/M <sup>3</sup>	4 hours

### Potential acute health effects

Eye contact	: Causes eye irritation.
Inhalation	: May cause damage to organs through prolonged or repeated exposure.
Skin contact	: Causes skin irritation.
Ingestion	: Expect low ingestion hazard. DO NOT induce vomiting. AVOID ASPIRATION.

### Delayed and immediate effects and also chronic effects from short and long term exposure

Prolonged or repeated inhalation of petroleum distillates may cause damage to organs.

Carcinogenicity	: None of the components of this mixture are considered to be carcinogen by IARC, ACGIH, NTP, or OSHA. Bitumen fumes generated at paving temperatures in excess of 250 F (120 C) are classified by IARC as “possible carcinogenic to human” (Group 2B) but this product is used at ambient temperature and does not generate fumes.
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## Section 12. Ecological information



Eco Toxicity	: This mixture contains components that are potentially toxic to freshwater and saltwater ecosystems.
Environmental Fate	: This material may be harmful to aquatic organisms and may cause long term adverse effects in the aquatic environment.

## Section 13. Disposal Considerations

### Disposal methods

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recycled products via a licensed waste disposal contractor. Waste should not be disposed of to a sewer. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, water ways, drains and sewers.

## Section 14. Transportation information

	DOT Classification	IATA	IMDG
UN Number	NA1993	UN 1993	UN 1993
UN Proper Shipping Name	Combustible Liquid, N.O.S. (contains Petroleum Distillates, n.o.s.)	Flammable Liquid, N.O.S. (contains Petroleum Distillates, n.o.s.)	Flammable Liquid, N.O.S. (contains Petroleum Distillates, n.o.s.)
Transportation hazard class	3	3 	3 
Packing Group	III	III	III
Additional Information	Exceptions: 173.150 Non bulk: 173.203	Limited quantity- Passenger aircraft- 60 L Cargo Aircraft- 220 L	Vessel stowage location A

## Section 15. Regulatory information

### U.S. Federal regulations: [SARA 311/312](#) [SARA 313](#)

: **United States inventory (TSCA 8 b):** all components are listed or exempted  
: Fire hazard  
: This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

### [State regulations](#) [California Prop 65](#)

: This product does not contain any Proposition 65 chemicals.

## 16. Other information

Date of revision:	8/28/18
Date of previous issue	New
Revisions:	New product
Version	1
Prepared by	C. Rogalski

Notice to reader: To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



## Safety Data Sheet

Conforms to HazCom 2012/ United States

### Section 1. Identification

**GHS product Identifier** : VM Precoat Adhesive  
**Other means of identification** : Not available

**Relevant identified used of the substance or mixtures and uses advised against**

Aromatic & aliphatic hydrocarbon adhesive

**Supplier's details** American Hydrotech, Inc.  
303 East Ohio Street  
Chicago, Illinois 60611  
Tel: (800) 877-6125 ( M-F 8 am to 5 pm CST)  
PERS #11540: 800-633-8253 (24/7)

**Emergency telephone number)  
with hours of operation)**

### Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazardous Communications Standard (49CFR1910.1200) .

**Classification of the substance or mixture** : Flammable liquid- Category 2  
Skin Corrosion/Irritation- Category 2  
Toxic to reproductive (Fertility)- Category 2  
Toxic to reproduction (unborn child)- Category 2  
Specific target organ toxicity ( single exposure) (Narcotic effects) – Category 3  
Specific target organ toxicity ( repeated exposure)– Category 2  
Aspiration hazard- Category 1  
Aquatic toxicity ( Chronic) – Category 2

**GHS label elements**

**Hazard pictogram**



**Signal word**

**Hazard statement**

: Danger  
: Highly flammable liquid and vapor  
Causes skin irritation  
Suspected of damaging fertility or the unborn child.  
May be fatal if swallowed and enters airways.  
May cause drowsiness and dizziness.  
May cause damage to organs through prolonged or repeated exposure.  
Toxic to aquatic life with long lasting effects.

**Precautionary statements**

**Prevention**

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear eye and face protection. Keep away from heat, sparks, open flames and hot surfaces. – No smoking. Use explosion- proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Do not breathe vapor. Wash hands thoroughly after handling.

## Section 2. Hazards identification

<b>Response</b>	Collect spillage; Get medical attention if you feel unwell. If exposure or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. If SWALLOWED: Immediately call a POISON CENTER or physician. DO NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash with plenty of soap and water. If skin irritation occurs: Get medical attention.
<b>Storage</b>	Store locked up. Store in a well-ventilated place. Keep cool.
<b>Disposal</b>	Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Hazards not otherwise classified</b>	: None known

## Section 3. Composition/information on ingredients

<b>Substance/Mixture</b>	: Mixture
<b>Other means of identification</b>	: Not available
<b><u>CAS number/other identifiers</u></b>	
<b>CAS number</b>	: Not applicable
<b>Product code</b>	: Not applicable

<b>Ingredient name</b>	<b>%</b>	<b>CAS Number</b>
Toluene	30-60	108-88-3
n-Hexane	30-60	110-54-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures.

<b>Eye contact</b>	: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.
<b>Inhalation</b>	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway
<b>Skin contact</b>	: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 20 minutes. Get medical attention.
<b>Ingestion</b>	: Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that the vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

## Section 4. First aid measures

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

Eye contact	: Causes serious eye irritation.
Inhalation	: Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.
Skin contact	: Causes skin irritation.
Ingestion	: Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

### Over-exposure signs/symptoms

Eye contact	: Adverse symptoms may include the following: Pain or irritation, Watering, Redness.
Inhalation	: Adverse symptoms may include the following: Nausea or vomiting Headache Drowsiness/fatigue Dizziness/vertigo Unconsciousness Reduced fetal weight Increase in fetal deaths Skeletal malformations
Skin contact	: Adverse symptoms may include the following: Irritation Redness Reduced fetal weight Increase in fetal deaths Skeletal malformations
Ingestion	: Adverse symptoms may include the following: Nausea or vomiting Reduced fetal weight Increase in fetal deaths Skeletal malformations

### Indication of immediate medical attention and special treatment needed, if necessary.

Notes to physician:	: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatment
Protection of first-aiders:	: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing the aid to give mouth to mouth resuscitation.

## Section 5. Fire-fighting measures

### Extinguishing media

Suitable extinguishing media	: Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam.
Unsuitable extinguishing media	: Do not use water- jet or water based fire extinguishers.
Specific hazards arising from the chemical	: Highly flammable liquid and vapor. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: Carbon Dioxide Carbon Monoxide
Special protective equipment	: Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective actions for fire fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face piece operated in a positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures.

<b>For non emergency personal</b>	: Evacuate surrounding area. Keep unnecessary and unprotected personnel from entering. Shut off all ignition sources. No flares, smoking, or flames in hazard areas. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel."
<b>Environmental precautions</b>	: Avoid disposal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, or air).

### Methods and materials for containment and cleaning up

<b>Spill</b>	: Stop leak if without risk. Move container from spill area. Use spark proof tools and explosion proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements, or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
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## Section 7. Handling and storage

### Precautions for safe handling

<b>Protective measures</b>	: Put on appropriate personal protective equipment (see Section 8). Avoid exposure-obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until safety precautions have been read and understood. Do not get in eyes or on the skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage area or confined spaces unless adequately ventilated. Keep in original container or an approved alternative made from compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flames and any other ignition source. Use explosion-proof electrical (ventilation, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
<b>Advice on general occupational hygiene</b>	Eating, drinking and smoking should be prohibited in areas where material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See section 8 for additional information on hygiene measures.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in accordance with local regulations. Store in segregated and approved area. Store in original container protected from direct sunlight in a dry cool and well-ventilated area away from incompatible materials (see section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready to use. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.



## Section 8. Exposure controls/personal protection

### Control parameters Occupational exposure limits

Ingredient name	Exposure limits
<b>Toluene</b>	<b>NIOSH REL ( United States, 6/2009)</b> STEL: 560 mg/m <sup>3</sup> for 15 minutes STEL: 150 ppm for 15 minutes TWA: 375 mg/m <sup>3</sup> for 10 hours TWA: 100 ppm for 10 hrs <b>OSHA PEL Z2 ( United States, 11/2006)</b> AMP: 500 ppm 10 minutes CEIL:300 ppm TWA: 200 ppm 8 hrs <b>ACGIH TLV ( United States,3/2012)</b> TWA: 20 ppm 8 hrs
<b>n-Hexane</b>	<b>NIOSH REL ( United States, 6/2009)</b> TWA: 180 mg/m <sup>3</sup> for 10 hours TWA: 50 ppm for 10 hrs <b>OSHA PEL ( United States, 6/2010)</b> TWA: 1800 mg/m <sup>3</sup> 8 hrs TWA: 500 ppm 8 hrs <b>ACGIH TLV ( United States,3/2012) Absorbed through the skin.</b> TWA: 50 ppm 8 hrs

<b>Appropriate engineering controls</b>	: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas , vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
<b>Environmental exposure controls</b>	: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.
<b>Hygiene measure:</b>	: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the work station location.
<b>Eye/face protection</b>	: Safety eyewear complying with an approved standard should be used when risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases and dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: Chemical splash goggles.
<b>Skin Protection</b> <b>Hand protection</b>	: Chemical- resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
<b>Body protection</b>	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
<b>Other skin protection</b>	: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
<b>Respiratory protection</b>	: Use a properly fitted, air purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## Section 9. Physical and chemical properties

### Appearance

Physical state	: Liquid
Color	: Red
Odor	: Hydrocarbon (strong)
Odor threshold	: Not available
pH	: Not applicable
Melting point	: Not applicable
Boiling point	: 67°C ( 152.6° F)
Flash Point	: Closed cup: -19.4°C ( -2.9° F)
Burning time	: Not determined
Burning rate	: Not determined
Evaporation rate:	: 4.5 ( ether(anhydrous)=1)
Flammability(solid, gas)	: Not applicable
Lower & upper explosive ( flammable) limits	: Lower: 1.2% : Upper: 7.5%
Vapor density	: 20.3 kPa ( 152 mm Hg) @ room temperature
Vapor pressure	: 3.5 (Air=1)
Relative density	: 0.9
Solubility	: Partially soluble in the following materials: cold and hot water.
Partition coefficient: n- octanol/water	: Not available
Auto- ignition temperature	: Not available
Decomposition temperature	: Not available
SADT	: Not available
Viscosity	: 51-56 KU
VOC	: 527 g/l

## Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: This product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Conditions to avoid:	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
Incompatible materials	: Reactive or incompatible with the following materials: Oxidizing materials, acids, and alkalis.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Toluene	LC50 Inhalation Vapor	Rat	49 g/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	636m g/kg	-
n-Hexane	LC50 Inhalation Gas	Rat	48000 ppm	4 hours
	LD50 Oral	Rat	1584 mg/kg	-

## Section 11. Toxicological information

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Toluene	Eyes- Mild irritant	Rabbit	-	0.5 minutes 100 mg	-
	Skin- Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Eyes- Mild irritant	Rabbit	-	870 µg	-
	Eyes- Severe irritant	Rabbit	-	24 hours 2 mg	-
	Skin- Mild irritant	Pig	-	24 hours 250 µL	-
	Skin- Mild irritant	Rabbit	-	435 mg	-
	Skin- Moderate irritant	Rabbit	-	500 mg	-
n-Hexane	Eyes- Mild irritant	Rabbit	-	10 mg	-

### Sensitization

**Skin** : There is no data available

**Respiratory** : There is no data available

**Mutagenicity** : There is no data available

**Carcinogenicity** : There is no data available

### Classification

Product/ingredient name	OSHA	IARC	NTP
Toluene	-	3	-

**Reproductive toxicity** : There is no data available

**Teratogenicity** : There is no data available

### Specific target organ toxicity ( single exposure)

Name	Category	Route of Exposure	Target organs
Toluene	Category 3	Not applicable	Narcotic effects
n-Hexane	Category 3	Not applicable	Narcotic effects

### Specific target organ toxicity ( repeated exposure)

Name	Category	Route of Exposure	Target organs
Toluene	Category 2	Not determined	Not determined
n-Hexane	Category 2	Not determined	Not determined

### Aspiration hazard

Name	Results
Toluene	Aspiration Hazard- category 1
n-Hexane	Aspiration Hazard- category 1

**Information on the likely routes of exposure** : Routes of entry anticipated: Oral, dermal, inhalation.

### Potential acute health effects

**Eye contact** : Causes serious eye irritation.

**Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.

**Skin contact** : Causes skin irritation.

**Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

## Section 11. Toxicological information

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:  
Pain or irritation,  
Watering,  
Redness.

**Inhalation** : Adverse symptoms may include the following:  
Nausea or vomiting  
Headache  
Drowsiness/fatigue  
Dizziness/vertigo  
Unconsciousness  
Reduced fetal weight  
Increase in fetal deaths  
Skeletal malformations

**Skin contact** : Adverse symptoms may include the following:  
Irritation  
Redness  
Reduced fetal weight  
Increase in fetal deaths  
Skeletal malformations

**Ingestion** : Adverse symptoms may include the following:  
Nausea or vomiting  
Reduced fetal weight  
Increase in fetal deaths  
Skeletal malformations

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : No known significant effects or critical hazards

**Potential delayed effects** : No known significant effects or critical hazards

#### Long term exposure

**Potential immediate effects** : No known significant effects or critical hazards

**Potential delayed effects** : No known significant effects or critical hazards

#### Potential chronic health effects

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

**Carcinogenicity** : No known significant effects or critical hazards

**Mutagenicity** : No known significant effects or critical hazards

**Teratogenicity** : Suspected of damage to unborn child.

**Developmental effects** : No known significant effects or critical hazards

**Fertility effects** : Suspected of damage to fertility.

**Target organs** : Contains material which may cause damage to the following organs: kidneys, the nervous system, the reproductive system, liver, peripheral nervous system, upper respiratory tract, skin, central nervous system (CNS), eye, lens, or cornea.

### Numerical measures of toxicity

**Acute toxicity estimates** : There is no data available

## Section 12. Ecological information

<b>Toxicity</b>			
<b>Product/ingredient name</b>	<b>Result</b>	<b>Species</b>	<b>Exposure</b>
Toluene	Acute EC50 433 ppm Marine water	Algae-Skeletonnema costatum	96 hours
	Acute EC50 12500 µg/l Fresh water	Algae-Pseudokirchneriella Subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans-Gammarus pseudolimnaeus- Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia-Daphnia magna-Juvenile ( Fledging, Hatching, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish-Oncorhynchus kisutch-Fry	96 hours
	Chronic NOEC 500000µg/l Fresh water	Algae-Pseudokirchneriella subcapitata	96 hours
	Chronic NOEC 1000µg/l Fresh water	Daphnia-Daphnia magna	21 days
n-Hexane	Acute LC50 113000 µg/l Fresh water	Fish-Oreochromis mossambicus	96 hours

**Persistence and degradability** : There is no data available  
**Bio accumulative potential**

<b>Product/ingredient name</b>	<b>LogP<sub>ow</sub></b>	<b>BCF</b>	<b>Potential</b>
Toluene	2.69	8.317637711	low
n-Hexane	3.9	-	low

<b>Mobility in soil</b>	
<b>Soil/water partition coefficient (K<sub>oc</sub>)</b>	: Not applicable
<b>Other adverse effects</b>	: No known significant effects or critical hazards





## Section 13. Disposal Considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recycled products via a licensed waste disposal contractor. Waste should not be disposed of to a sewer. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, water ways, drains and sewers.

### United States- RCRA Toxic hazardous waste “U” List

<b>Ingredient</b>	<b>CAS#</b>	<b>Status</b>	<b>Reference number</b>
Toluene	108-88-3	Listed	U220

## Section 14. Transportation information

	DOT Classification	IMDG	IATA
UN Number	UN 1139	UN 1139	UN 1139
UN Proper Shipping Name	Coating Solution RQ (toluene, n-hexanes)	Coating Solution , Marine Pollutant	Coating Solution
Transportation hazard class(es)	3 	3  	3 
Packing Group	II	II	II
Environmental Hazard	Yes	Yes	Yes
Additional Information	Reportable Quantities 2999.4 lbs/1361.7 kg (399.7 gal/1513 L). Packages sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.	Emergency schedules (EmS) F-E, S-E	

### Special precautions for user

**: Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

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

: Not available

## Section 15. Regulatory information

### U.S. Federal regulations:

Clean Water Act(CWA) 307  
Clean Water Act(CWA) 311  
Clean Air Act Section 112 (b)  
Hazardous air pollutants (HAPs)

Clean Air Act (CAA) Section 602 Class I Substances  
Clean Air Act (CAA) Section 602 Class II Substances

DEA List I Chemicals ( Precursor chemicals)  
DEA List II Chemicals (Essential Chemicals)  
SARA 302/304

Composition/information on ingredients

SARA 304 RQ

**TSCA 8(a) CDR Exempt/Partial exemption:** Not determined

**United States inventory ( TSCA 8 b):** all components are listed or exempted

: Toluene

: Toluene

: Listed

: Not listed

: Not listed

: Not listed

: Listed

: No products found

: Not applicable

## Section 15. Regulatory information

### SARA 311/312

**Classification** : Fire Hazard,  
Immediate (acute) health hazard,  
Delayed (chronic) health.

### Composition/information on ingredients

Name	%	Fire Hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed(chronic) health hazard
Toluene	30-60	Yes	No	No	Yes	Yes
n-Hexane	30-60	Yes	No	No	Yes	Yes

<u>SARA 313</u>			
	Product name	CAS Number	%
<b>Form R-reporting requirements</b>	Toluene	108-88-3	30-60
	n-Hexane	110-54-3	30-60
<b>Supplier notification</b>	Toluene	108-88-3	30-60
	n-Hexane	110-54-3	30-60

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS.

### State regulations

**Massachusetts** : The following components are listed: Toluene ; n-Hexane  
**New Jersey** : The following components are listed: Toluene ; n-Hexane  
**New York** : None of the components are listed: Toluene ; n-Hexane  
**Pennsylvania** : The following components are listed: Toluene ; n-Hexane  
**California Prop.65** : **Warning:** This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level.
Toluene	No	Yes	No	7000 µg/day (ingestion) 13000 µg/day ( inhalation)

### International regulations

**International lists** : Australia inventory ( AICS):Not determined  
: China inventory ( IECSC): Not determined  
: Japan inventory : Not determined  
: Korea inventory: Not determined  
: Malaysia inventory (EHS Register): Not determined  
: New Zealand Inventory of Chemicals ( NZIoC):Not determined  
: Philippines inventory ( PICCS): Not determined  
: Taiwan inventory (CSNN): Not determined  
: Not listed

### **Chemical Weapons**

**Convention List schedule I**  
**Chemicals**

**Chemical Weapons** : Not listed

**Convention List schedule II**  
**Chemicals**

**Chemical Weapons** : Not listed

**Convention List schedule III**  
**Chemicals**

## 16. Other information

### Hazardous Material Information System ( USA)

**Health -2****Flammability-3****Physical hazards-0**

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with fully implemented HMIS® program. HMIS® is a registered trademark of the National Paint & Coating Association (NPCA). HMIS® materials may be purchased exclusively from J.J. Keller.

The customer is responsible for determining the PPE code for this material.

### National Fire Protection Association ( USA) NFPA 704

**Health -2****Flammability-3****Instability-0**

NFPA-704 was copyrighted by the National Fire Protection Association of Quincy, MA. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactive hazards of chemicals. The user is referred to certain limited number of with recommended classifications in NFPA 49 and NFPA 325, which would be used as guidelines only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

**Date of revision:****1/5/14****Date of previous issue****2/27/12****Revisions:****Revision to entire document for compliance of new HazCom rules.****Version****3****Prepared by****C. Rogalski**

**Notice to reader: To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.**





## Safety Data Sheet

Conforms to HazCom 2012/ United States

### Section 1. Identification

**GHS product Identifier** : VM Precoat Adhesive  
**Other means of identification** : Not available

**Relevant identified used of the substance or mixtures and uses advised against**

Aromatic & aliphatic hydrocarbon adhesive

**Supplier's details** American Hydrotech, Inc.  
303 East Ohio Street  
Chicago, Illinois 60611  
Tel: (800) 877-6125 ( M-F 8 am to 5 pm CST)  
PERS #11540: 800-633-8253 (24/7)

**Emergency telephone number)  
with hours of operation)**

### Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazardous Communications Standard (49CFR1910.1200) .

**Classification of the substance or mixture** : Flammable liquid- Category 2  
Skin Corrosion/Irritation- Category 2  
Toxic to reproductive (Fertility)- Category 2  
Toxic to reproduction (unborn child)- Category 2  
Specific target organ toxicity ( single exposure) (Narcotic effects) – Category 3  
Specific target organ toxicity ( repeated exposure)– Category 2  
Aspiration hazard- Category 1  
Aquatic toxicity ( Chronic) – Category 2

**GHS label elements**

**Hazard pictogram**



**Signal word**

**Hazard statement**

: Danger  
: Highly flammable liquid and vapor  
Causes skin irritation  
Suspected of damaging fertility or the unborn child.  
May be fatal if swallowed and enters airways.  
May cause drowsiness and dizziness.  
May cause damage to organs through prolonged or repeated exposure.  
Toxic to aquatic life with long lasting effects.

**Precautionary statements**

**Prevention**

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear eye and face protection. Keep away from heat, sparks, open flames and hot surfaces. – No smoking. Use explosion- proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Do not breathe vapor. Wash hands thoroughly after handling.

## Section 2. Hazards identification

<b>Response</b>	Collect spillage; Get medical attention if you feel unwell. If exposure or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. If SWALLOWED: Immediately call a POISON CENTER or physician. DO NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash with plenty of soap and water. If skin irritation occurs: Get medical attention.
<b>Storage</b>	Store locked up. Store in a well-ventilated place. Keep cool.
<b>Disposal</b>	Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Hazards not otherwise classified</b>	: None known

## Section 3. Composition/information on ingredients

<b>Substance/Mixture</b>	: Mixture
<b>Other means of identification</b>	: Not available
<b><u>CAS number/other identifiers</u></b>	
<b>CAS number</b>	: Not applicable
<b>Product code</b>	: Not applicable

<b>Ingredient name</b>	<b>%</b>	<b>CAS Number</b>
Toluene	30-60	108-88-3
n-Hexane	30-60	110-54-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures.

<b>Eye contact</b>	: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.
<b>Inhalation</b>	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway
<b>Skin contact</b>	: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 20 minutes. Get medical attention.
<b>Ingestion</b>	: Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that the vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

## Section 4. First aid measures

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

Eye contact	: Causes serious eye irritation.
Inhalation	: Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.
Skin contact	: Causes skin irritation.
Ingestion	: Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

### Over-exposure signs/symptoms

Eye contact	: Adverse symptoms may include the following: Pain or irritation, Watering, Redness.
Inhalation	: Adverse symptoms may include the following: Nausea or vomiting Headache Drowsiness/fatigue Dizziness/vertigo Unconsciousness Reduced fetal weight Increase in fetal deaths Skeletal malformations
Skin contact	: Adverse symptoms may include the following: Irritation Redness Reduced fetal weight Increase in fetal deaths Skeletal malformations
Ingestion	: Adverse symptoms may include the following: Nausea or vomiting Reduced fetal weight Increase in fetal deaths Skeletal malformations

### Indication of immediate medical attention and special treatment needed, if necessary.

Notes to physician:	: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatment
Protection of first-aiders:	: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing the aid to give mouth to mouth resuscitation.

## Section 5. Fire-fighting measures

### Extinguishing media

Suitable extinguishing media	: Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam.
Unsuitable extinguishing media	: Do not use water- jet or water based fire extinguishers.
Specific hazards arising from the chemical	: Highly flammable liquid and vapor. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: Carbon Dioxide Carbon Monoxide
Special protective equipment	: Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective actions for fire fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face piece operated in a positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures.

<b>For non emergency personal</b>	: Evacuate surrounding area. Keep unnecessary and unprotected personnel from entering. Shut off all ignition sources. No flares, smoking, or flames in hazard areas. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel."
<b>Environmental precautions</b>	: Avoid disposal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, or air).

### Methods and materials for containment and cleaning up

<b>Spill</b>	: Stop leak if without risk. Move container from spill area. Use spark proof tools and explosion proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements, or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.
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## Section 7. Handling and storage

### Precautions for safe handling

<b>Protective measures</b>	: Put on appropriate personal protective equipment (see Section 8). Avoid exposure-obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until safety precautions have been read and understood. Do not get in eyes or on the skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage area or confined spaces unless adequately ventilated. Keep in original container or an approved alternative made from compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flames and any other ignition source. Use explosion-proof electrical (ventilation, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
<b>Advice on general occupational hygiene</b>	Eating, drinking and smoking should be prohibited in areas where material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See section 8 for additional information on hygiene measures.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in accordance with local regulations. Store in segregated and approved area. Store in original container protected from direct sunlight in a dry cool and well-ventilated area away from incompatible materials (see section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready to use. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

### Control parameters Occupational exposure limits

Ingredient name	Exposure limits
<b>Toluene</b>	<b>NIOSH REL ( United States, 6/2009)</b> STEL: 560 mg/m <sup>3</sup> for 15 minutes STEL: 150 ppm for 15 minutes TWA: 375 mg/m <sup>3</sup> for 10 hours TWA: 100 ppm for 10 hrs <b>OSHA PEL Z2 ( United States, 11/2006)</b> AMP: 500 ppm 10 minutes CEIL:300 ppm TWA: 200 ppm 8 hrs <b>ACGIH TLV ( United States,3/2012)</b> TWA: 20 ppm 8 hrs
<b>n-Hexane</b>	<b>NIOSH REL ( United States, 6/2009)</b> TWA: 180 mg/m <sup>3</sup> for 10 hours TWA: 50 ppm for 10 hrs <b>OSHA PEL ( United States, 6/2010)</b> TWA: 1800 mg/m <sup>3</sup> 8 hrs TWA: 500 ppm 8 hrs <b>ACGIH TLV ( United States,3/2012) Absorbed through the skin.</b> TWA: 50 ppm 8 hrs

<b>Appropriate engineering controls</b>	: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas , vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
<b>Environmental exposure controls</b>	: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.
<b>Hygiene measure:</b>	: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the work station location.
<b>Eye/face protection</b>	: Safety eyewear complying with an approved standard should be used when risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases and dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: Chemical splash goggles.
<b>Skin Protection</b>	
<b>Hand protection</b>	: Chemical- resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
<b>Body protection</b>	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
<b>Other skin protection</b>	: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
<b>Respiratory protection</b>	: Use a properly fitted, air purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## Section 9. Physical and chemical properties

### Appearance

Physical state	: Liquid
Color	: Red
Odor	: Hydrocarbon (strong)
Odor threshold	: Not available
pH	: Not applicable
Melting point	: Not applicable
Boiling point	: 67°C ( 152.6° F)
Flash Point	: Closed cup: -19.4°C ( -2.9° F)
Burning time	: Not determined
Burning rate	: Not determined
Evaporation rate:	: 4.5 ( ether(anhydrous)=1)
Flammability(solid, gas)	: Not applicable
Lower & upper explosive ( flammable) limits	: Lower: 1.2% : Upper: 7.5%
Vapor density	: 20.3 kPa ( 152 mm Hg) @ room temperature
Vapor pressure	: 3.5 (Air=1)
Relative density	: 0.9
Solubility	: Partially soluble in the following materials: cold and hot water.
Partition coefficient: n- octanol/water	: Not available
Auto- ignition temperature	: Not available
Decomposition temperature	: Not available
SADT	: Not available
Viscosity	: 51-56 KU
VOC	: 527 g/l

## Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: This product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Conditions to avoid:	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
Incompatible materials	: Reactive or incompatible with the following materials: Oxidizing materials, acids, and alkalis.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Toluene	LC50 Inhalation Vapor	Rat	49 g/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	636m g/kg	-
n-Hexane	LC50 Inhalation Gas	Rat	48000 ppm	4 hours
	LD50 Oral	Rat	1584 mg/kg	-

## Section 11. Toxicological information

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Toluene	Eyes- Mild irritant	Rabbit	-	0.5 minutes 100 mg	-
	Skin- Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Eyes- Mild irritant	Rabbit	-	870 µg	-
	Eyes- Severe irritant	Rabbit	-	24 hours 2 mg	-
	Skin- Mild irritant	Pig	-	24 hours 250 µL	-
	Skin- Mild irritant	Rabbit	-	435 mg	-
	Skin- Moderate irritant	Rabbit	-	500 mg	-
n-Hexane	Eyes- Mild irritant	Rabbit	-	10 mg	-

### Sensitization

**Skin** : There is no data available

**Respiratory** : There is no data available

**Mutagenicity** : There is no data available

**Carcinogenicity** : There is no data available

### Classification

Product/ingredient name	OSHA	IARC	NTP
Toluene	-	3	-

**Reproductive toxicity** : There is no data available

**Teratogenicity** : There is no data available

### Specific target organ toxicity ( single exposure)

Name	Category	Route of Exposure	Target organs
Toluene	Category 3	Not applicable	Narcotic effects
n-Hexane	Category 3	Not applicable	Narcotic effects

### Specific target organ toxicity ( repeated exposure)

Name	Category	Route of Exposure	Target organs
Toluene	Category 2	Not determined	Not determined
n-Hexane	Category 2	Not determined	Not determined

### Aspiration hazard

Name	Results
Toluene	Aspiration Hazard- category 1
n-Hexane	Aspiration Hazard- category 1

**Information on the likely routes of exposure** : Routes of entry anticipated: Oral, dermal, inhalation.

### Potential acute health effects

**Eye contact** : Causes serious eye irritation.

**Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.

**Skin contact** : Causes skin irritation.

**Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.



## Section 11. Toxicological information

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:  
Pain or irritation,  
Watering,  
Redness.

**Inhalation** : Adverse symptoms may include the following:  
Nausea or vomiting  
Headache  
Drowsiness/fatigue  
Dizziness/vertigo  
Unconsciousness  
Reduced fetal weight  
Increase in fetal deaths  
Skeletal malformations

**Skin contact** : Adverse symptoms may include the following:  
Irritation  
Redness  
Reduced fetal weight  
Increase in fetal deaths  
Skeletal malformations

**Ingestion** : Adverse symptoms may include the following:  
Nausea or vomiting  
Reduced fetal weight  
Increase in fetal deaths  
Skeletal malformations

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : No known significant effects or critical hazards

**Potential delayed effects** : No known significant effects or critical hazards

#### Long term exposure

**Potential immediate effects** : No known significant effects or critical hazards

**Potential delayed effects** : No known significant effects or critical hazards

#### Potential chronic health effects

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

**Carcinogenicity** : No known significant effects or critical hazards

**Mutagenicity** : No known significant effects or critical hazards

**Teratogenicity** : Suspected of damage to unborn child.

**Developmental effects** : No known significant effects or critical hazards

**Fertility effects** : Suspected of damage to fertility.

**Target organs** : Contains material which may cause damage to the following organs: kidneys, the nervous system, the reproductive system, liver, peripheral nervous system, upper respiratory tract, skin, central nervous system (CNS), eye, lens, or cornea.

### Numerical measures of toxicity

**Acute toxicity estimates** : There is no data available



## Section 12. Ecological information

<b>Toxicity</b>			
<b>Product/ingredient name</b>	<b>Result</b>	<b>Species</b>	<b>Exposure</b>
Toluene	Acute EC50 433 ppm Marine water	Algae-Skeletonema costatum	96 hours
	Acute EC50 12500 µg/l Fresh water	Algae-Pseudokirchneriella Subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans-Gammarus pseudolimnaeus- Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia-Daphnia magna-Juvenile ( Fledging, Hatching, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish-Oncorhynchus kisutch-Fry	96 hours
	Chronic NOEC 500000µg/l Fresh water	Algae-Pseudokirchneriella subcapitata	96 hours
	Chronic NOEC 1000µg/l Fresh water	Daphnia-Daphnia magna	21 days
n-Hexane	Acute LC50 113000 µg/l Fresh water	Fish-Oreochromis mossambicus	96 hours

**Persistence and degradability** : There is no data available  
**Bio accumulative potential**

<b>Product/ingredient name</b>	<b>LogP<sub>ow</sub></b>	<b>BCF</b>	<b>Potential</b>
Toluene	2.69	8.317637711	low
n-Hexane	3.9	-	low

<b>Mobility in soil</b>	
<b>Soil/water partition coefficient (K<sub>oc</sub>)</b>	: Not applicable
<b>Other adverse effects</b>	: No known significant effects or critical hazards





## Section 13. Disposal Considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recycled products via a licensed waste disposal contractor. Waste should not be disposed of to a sewer. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, water ways, drains and sewers.

### United States- RCRA Toxic hazardous waste “U” List

<b>Ingredient</b>	<b>CAS#</b>	<b>Status</b>	<b>Reference number</b>
Toluene	108-88-3	Listed	U220

## Section 14. Transportation information

	DOT Classification	IMDG	IATA
UN Number	UN 1139	UN 1139	UN 1139
UN Proper Shipping Name	Coating Solution RQ (toluene, n-hexanes)	Coating Solution , Marine Pollutant	Coating Solution
Transportation hazard class(es)	3 	3  	3 
Packing Group	II	II	II
Environmental Hazard	Yes	Yes	Yes
Additional Information	Reportable Quantities 2999.4 lbs/1361.7 kg (399.7 gal/1513 L). Packages sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.	Emergency schedules (EmS) F-E, S-E	

### Special precautions for user

**: Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

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

: Not available

## Section 15. Regulatory information

### U.S. Federal regulations:

Clean Water Act(CWA) 307

Clean Water Act(CWA) 311

Clean Air Act Section 112 (b)

Hazardous air pollutants (HAPs)

Clean Air Act (CAA) Section

602 Class I Substances

Clean Air Act (CAA) Section

602 Class II Substances

DEA List I Chemicals

( Precursor chemicals)

DEA List II Chemicals

(Essential Chemicals)

SARA 302/304

Composition/information on ingredients

SARA 304 RQ

**TSCA 8(a) CDR Exempt/Partial exemption:** Not determined

**United States inventory ( TSCA 8 b):** all components are listed or exempted

: Toluene

: Toluene

: Listed

: Not listed

: Not listed

: Not listed

: Listed

: No products found

: Not applicable

## Section 15. Regulatory information

### SARA 311/312

**Classification** : Fire Hazard,  
Immediate (acute) health hazard,  
Delayed (chronic) health.

### Composition/information on ingredients

Name	%	Fire Hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed(chronic) health hazard
Toluene	30-60	Yes	No	No	Yes	Yes
n-Hexane	30-60	Yes	No	No	Yes	Yes

<u>SARA 313</u>			
	Product name	CAS Number	%
<b>Form R-reporting requirements</b>	Toluene	108-88-3	30-60
	n-Hexane	110-54-3	30-60
<b>Supplier notification</b>	Toluene	108-88-3	30-60
	n-Hexane	110-54-3	30-60

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS.

### State regulations

**Massachusetts** : The following components are listed: Toluene ; n-Hexane  
**New Jersey** : The following components are listed: Toluene ; n-Hexane  
**New York** : None of the components are listed: Toluene ; n-Hexane  
**Pennsylvania** : The following components are listed: Toluene ; n-Hexane  
**California Prop.65** : **Warning:** This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level.
Toluene	No	Yes	No	7000 µg/day (ingestion) 13000 µg/day ( inhalation)

### International regulations

**International lists** : Australia inventory ( AICS):Not determined  
: China inventory ( IECSC): Not determined  
: Japan inventory : Not determined  
: Korea inventory: Not determined  
: Malaysia inventory (EHS Register): Not determined  
: New Zealand Inventory of Chemicals ( NZIoC):Not determined  
: Philippines inventory ( PICCS): Not determined  
: Taiwan inventory (CSNN): Not determined  
: Not listed

### **Chemical Weapons**

**Convention List schedule I**  
**Chemicals**

**Chemical Weapons** : Not listed

**Convention List schedule II**  
**Chemicals**

**Chemical Weapons** : Not listed

**Convention List schedule III**  
**Chemicals**

## 16. Other information

### Hazardous Material Information System ( USA)

**Health -2****Flammability-3****Physical hazards-0**

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**Date of revision:****1/5/14****Date of previous issue****2/27/12****Revisions:****Revision to entire document for compliance of new HazCom rules.****Version****3****Prepared by****C. Rogalski**

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