1 RMR-141 DISINFECTANT

2 HANDIFOAM WINDOW / DOOR

3 HANDIFOAM FIRE BLOCK

4 RMR - NEUTRALIZER
CHLORINEODOR ELIMINATOR

5 US GREENFIBER SANCTUARY

6 HUNTSMAN ISOCYANATE
COMPONENT A

7 FSB - IB IGNITION BARRIER

8 FOAM - LOK FL2000 - ALL GRADES

9

10

11

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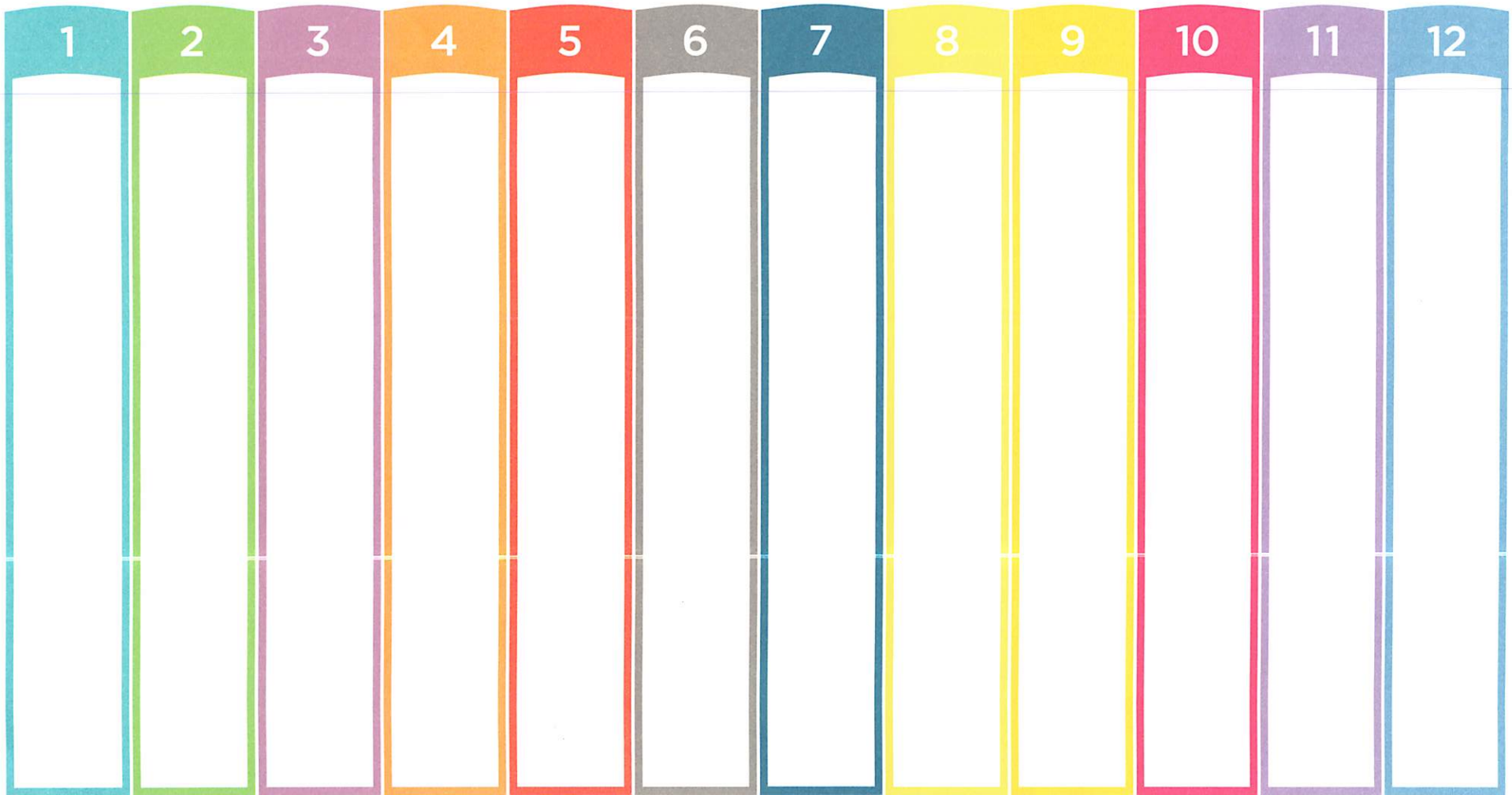
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SAFETY DATA SHEET

RMR-141 Concentrate Formula

Date Issued : 5/1/2018

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: RMR-141 Concentrated Formula
GENERAL USE: Disinfectant, Virucide, Fungicide
PRODUCT DESCRIPTION: Disinfectant
PRODUCT CODE:
DISTRIBUTOR

RMR Solutions, LLC
301 Applan Way Suite 301
Brighton, MI 48116

E-Mail: info@rmrsolutions.com

Phone: 1-866-822-8744

24 HR. EMERGENCY TELEPHONE NUMBERS
CHEM-TEL: (800) 255-3924

EPA REG. NO.: 61178-1-93443

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Skin Corr. 1C
Eye Dam. 1
Acute Tox. 4 (oral)

GHS05 Corrosion **GHS07**

SIGNAL WORD: DANGER

HAZARD STATEMENTS

Skin Corr. 1C H314: Causes severe skin burns and eye damage.
Eye Dam. 1 H318: Causes serious eye damage.
Acute Tox. 4 H302: Harmful if swallowed.

PRECAUTIONARY STATEMENTS

P260 Do not breathe mist/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P303+P361+P353+P310 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center / doctor.
P363 Wash contaminated clothing before reuse.
P305+P351+P358 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or a doctor/physician.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS
n-Alkyl dimethyl benzyl ammonium chloride (C12-C18)	2.37	68391-01-5
N-alkyl Dimethyl Ethyl Benzyl Ammonium Chloride (C12-C14)	2.37	68956-79-6

4. FIRST AID MEASURES

EYES: Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Seek medical attention immediately.

SKIN: Wash with soap and water. Get medical attention if irritation develops or persists.

INGESTION: Get immediate medical attention. Do not induce vomiting unless instructed to do so by poison center or physician.

INHALATION: Remove victim to fresh air and monitor. Seek medical advise if irritation persists.

NOTES TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE FIGHTING MEASURES

FLAMMABLE CLASS: None

HAZARDOUS COMBUSTION PRODUCTS: Not Established

EXPLOSION HAZARDS: None

HAZARDOUS DECOMPOSITION PRODUCTS: Not Established

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Avoid runoff into storm sewers and ditches which lead to waterways.

LARGE SPILL: Avoid walking in material. Prevent product from entering into stream, soil, storm sewer or other bodies of water.

ENVIRONMENTAL PRECAUTIONS

WATER SPILL: Avoid discharges into open waterways.

LAND SPILL: Avoid discharge to soil.

AIR SPILL: NA = Not Applicable

GENERAL PROCEDURES: Isolate spill or leak area immediately. Keep unauthorized personnel away. Do not touch or walk through spilled material. Prevent entry into waterways, sewers, or confined areas. ABsorb withdry earth, sand or other non-combustible material and transfer to containers.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Store containers away from children. Close container after use.

HANDLING: Avoid contact with skin and eyes. Wash hands before eating, drinking, smoking or using toilet facilities.

STORAGE: Store in area inaccessible to children.

STORAGE TEMPERATURE: Store at ambient temperatures.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Chemical splash googles, full face-shield.

SKIN: Rubber or other chemical resistant gloves. Rubber boots of used on floors. Chemical resistant outerwear (tyvek) if contact with spray or mist is anticipated.

RESPIRATORY: Where danger of mist contact may occur, wear NIOSH approved respiratory protection for mists.

PROTECTIVE CLOTHING: None Expected.

WORK HYGIENIC PRACTICES: Wash with soap and water after handling. Do not eat, drink or smoke while using product.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

ODOR: Mild, pleasant

COLOR: Clear

pH: 11.5 to 12.5

FLASH POINT AND METHOD: NA = Not Applicable

FLAMMABLE LIMITS: NA = Not Applicable

VAPOR PRESSURE: 20

VAPOR DENSITY: ~ 1

BOILING POINT: 212º F; 100º C

SOLUBILITY IN WATER: Complete

EVAPORATION RATE: ~ 1

DENSITY: 8.66

SPECIFIC GRAVITY: 1.039 grams/ml.

VISCOSITY: Water thin.

10. STABILITY AND REACTIVITY

STABLE: Yes

HAZARDOUS POLYMERIZATION: No

POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Oxidizing materials.

HAZARDOUS DECOMPOSITION PRODUCTS: Not Established

INCOMPATIBLE MATERIALS: Strong acids, oxidizers.

11. TOXICOLOGICAL INFORMATION

ACUTE

Chemical Name	ORAL LD_{50} (rat)	DERMAL LD_{50} (rabbit)
n-Alkyl dimethyl benzyl ammonium chloride (C12-C18)	> 1890 mg/kg	> 2000 mg/kg
N-alkyl Dimethyl Ethyl Benzyl Ammonium Chloride (C12-C14)	> 500	> 2000

DERMAL LD_{50}: > 2000 mg/kg male and female rabbits.

ORAL LD_{50}: > 1890 mg/kg Male and Female rats.

EYE EFFECTS: Corrosive to eyes. Permanent damage may occur.

SKIN EFFECTS: Severe skin irritant. May cause burns to skin.

CARCINOGENICITY

IARC: None known.

OSHA: None known.

SENSITIZATION: Not Available

REPRODUCTIVE EFFECTS: None known.

TARGET ORGANS: None known.

TERATOGENIC EFFECTS: Not Available

MUTAGENICITY: Not Available

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: Not Available

ECOTOXICOLOGICAL INFORMATION: No known significant effects or critical hazards noted.

BIOACCUMULATION/ACCUMULATION: Not Available

AQUATIC TOXICITY (ACUTE): Not Established

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Although not a hazardous waste, the discarding or disposal of this material should be done at a properly permitted facility in accordance with the regulations 40CFR 262, 263, 264, and 268. Additionally, the discarding or disposal of this material may be further regulated by state, regional, or local regulations.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not regulated.

ROAD AND RAIL (ADR/RID)

PROPER SHIPPING NAME: Not regulated.

AIR (ICAO/IATA)

SHIPPING NAME: Not regulated.

VESSEL (IMO/IMDG)

SHIPPING NAME: Not regulated.

CANADA TRANSPORT OF DANGEROUS GOODS

SHIPPING NAME: Not regulated.

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES: Health - Acute

REACTIVITY: Yes

313 REPORTABLE INGREDIENTS: No products were found.

302/304 EMERGENCY PLANNING

EMERGENCY PLAN: No products were found.

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA REGULATORY: None

TSCA (TOXIC SUBSTANCE CONTROL ACT)

Chemical Name	CAS
n-Alkyl dimethyl benzyl ammonium chloride (C12-C18)	68391-01-5
N-alkyl Dimethyl Ethyl Benzyl Ammonium Chloride (C12-C14)	68956-79-6

TSCA REGULATORY: All ingedients are listed on the TSCA Chemical Inventory.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

29 CFR1910.119—PROCESS SAFETY MANAGEMENT OF HIGHLY HAZARDOUS CHEMICALS: No products were found.

CARCINOGEN: No products were found.

FIFRA (FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT): Regulated

16. OTHER INFORMATION

APPROVED BY: Chris Atkinson **TITLE:** President

SECTION 1 – IDENTIFICATION

PRODUCT IDENTIFIER: Cellulose Insulation

PRODUCT NAME: SANCTUARY (INSSANC)

MANUFACTURER: US Greenfiber
5500 77 Center Drive, Suite 100, Charlotte, NC 28217, USA
Emergency Telephone Number: 800-666-4824 (8 am - 5 pm EST Mon-Fri)

SECTION 2 – HAZARD IDENTIFICATION

Classification According to OSHA Hazard Communication Standard (29 CFR 1910.1200)

Classification: While this material is not considered hazardous by the OSHA Hazard Communication Standard, 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 user of this product.

Signal Word: No Signal Word

Hazard Statement: No known significant effects or critical hazards

Other Hazards: Cellulose fiber is a combustible dust when not treated with fire retardant

Precautionary Statements: Prevention: Obtain special instruction before use. Do not handle until all safety precautions have been read and understood.
Use personal protective equipment as required per section 8.
Response: If exposed or concerned, get medical advice/attention.
Disposal: Dispose of in accordance to local and state regulations.

SECTION 3 – COMPOSITION AND INGREDIENT INFORMATION

COMPONENT	CAS#	% BY WEIGHT	EXPOSURE LIMITS
Newsprint (Cellulose Fiber)	#65996-61-4	Up to 85%	See Section 8 for Occupational Exposure Limits
Boric Acid H3BO3	#10043-35-3	Not more than 15%	See Section 8 for Occupational Exposure Limits
Calcium Sulfate Dihydrate	#10101-41-4	Not more than 4%	See Section 8 for Occupational Exposure Limits
Amylopectin	#112899-91-0	Up to 2%	See Section 8 for Occupational Exposure Limits
Distillate Mineral Oil	#8042-47-5	Not more than 2%	See Section 8 for Occupational Exposure Limits

SECTION 4 – FIRST AID MEASURES

Description of necessary first aid measures:

- **Eyes:** For dust exposure, immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention if irritation persists.
- **Skin:** If skin is exposed, wash with soap and large amounts of water. If irritation persists, seek medical attention.
- **Inhalation:** If irritation or difficulty in breathing occurs, remove to fresh air. Seek medical attention if condition persists.
- **Ingestion:** Symptoms may include diarrhea, nausea, and vomiting. Seek medical attention if material was ingested and symptoms occur.

Most important symptoms and effects both acute and delayed:

- **Acute:** Minor respiratory and eye irritant. Not a skin irritant unless skin is broken. Gloves should be worn in that situation.
- **Chronic:** None known

Indication of any immediate medical attention and special treatment needed:

- **Note to Physicians:** Exposure to dust may aggravate symptoms of persons with pre-existing respiratory tract conditions and may cause skin and gastrointestinal symptoms.

SECTION 5 – FIRE FIGHTING MEASURES

Suitable extinguishing media:

- **Extinguishing Media:** Water, dry chemical and other agents rated for a wood fire (Type A fire). Use Type A rated extinguisher.

Unsuitable extinguishing media:

- None known

Special hazards arising from the chemical:

- **Combustible:** Material may decompose on contact with extreme temperatures and open flames.

Special protective equipment and precautions for firefighters:

- If possible, isolate the fire by moving other combustible materials. If the fire is small, use a hose-line or extinguisher rated for a Type A fire. If possible, dike and collect water used to fight fires. Firefighters should wear normal protective equipment (full bunker gear) and positive-pressure, self-contained breathing apparatus.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures:

- **For non-emergency personnel:**
  - Eye goggles and gloves are not required for normal industrial exposures, but eye protection according to ANSI Z.87.1 or other national standard. Respirators should be considered if environment is excessively dusty.
- **For emergency responders:**
  - Eye goggles and gloves are not required for normal industrial exposures, but eye protection according to ANSI Z.87.1 or other national standard. Respirators should be considered if environment is excessively dusty.

Environmental precautions:

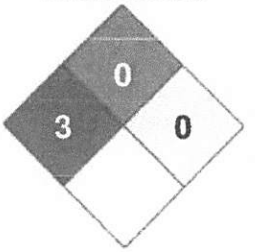
- Contains water-soluble inorganic mineral salts which may damage trees or vegetation exposed to large quantities. At high concentrations, may damage localized vegetation,fish, and other aquatic life.This product is a non-hazardous waste when spilled or disposed of as defined in the Resource Conservation and Recovery Act (RCRA) regulations (40 CFR 261).

PREPARED BY: Stearns Packaging Corporation

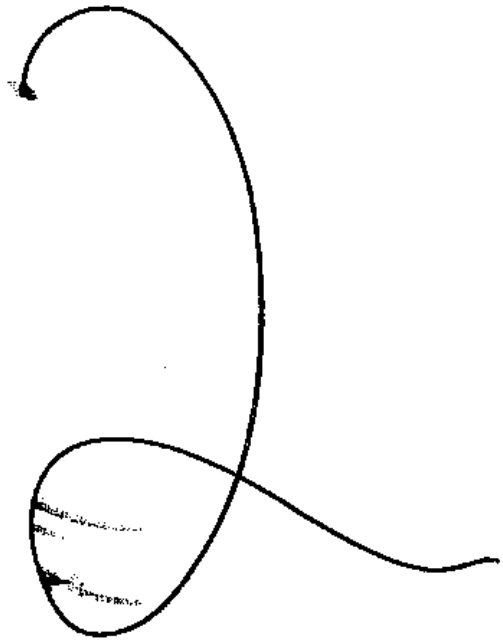
HMIS RATING

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	B

NFPA CODES



MANUFACTURER DISCLAIMER: This company cannot anticipate all conditions of handling and use of this product. Therefore, this company accepts no responsibility for results obtained by the application of this information, or the safety and suitability of the product either alone or in combination with other products. It is the responsibility of the employer and/or user to provide a safe workplace, using health and safety information contained herein as a guide. This company will accept no liability for damages or losses incurred from the improper handling and use of this product.



SAFETY DATA SHEET
LOW PRESSURE POLYURETHANE FOAM SEALANTS (HC)

SECTION 1- PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identifier

Product Name: HandiFoam® HC Gun Foam, HandiFoam® HC Straw Foam, HandiFoam® Fireblock, HandiFoam® Fireblock West, HandiFoam® Black, HandiFoam® Extreme, HandiFoam® Window & Door, HandiFoam® Window & Door West and HandiFoam® Extreme Window & Door Polyurethane Foam Sealants

SDS ID Number **A16186**

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

General Use: One Component Polyurethane Foam Sealant

Uses advised against

1.3 Details of the supplier and of the safety data sheet

Manufacturer: ICP Building Solutions Group
2775 Barber Road
Norton, Ohio 44203
In Ohio: 330-753-4585; 1-800-321-5585 (Monday-Friday 8:00am-5:00pm EST)

1.4 Emergency telephone numbers

In the U.S.A: CHEMTEL 1-800-255-3924

International Emergency: CHEMTEL 1-813-248-0585

SECTION 2- HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Product definition: Mixture

Classification:
Flammable Aerosol- Category 1
Gases Under Pressure- Compressed Gas
Acute Toxicity Inhalation- Category 4
Skin Irritation- Category 2
Serious Eye Irritation- Category 2A
Respiratory Sensitizing- Category 1
Skin Sensitization – Category 1
Effects on or via lactation
Specific Target Organ Toxicity SE 3
Specific Target Organ Toxicity RE 2

2.2 Label elements

Hazard Symbols:

Signal Word: **DANGER**

Hazard Statements:
H222- Extremely flammable aerosol
H280- Contains gas under pressure; may explode if heated
H315- Causes Skin Irritation
H317- May cause an allergic skin reaction
H319- Causes Serious Eye Irritation
H332- Harmful if inhaled
H334- May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335- May cause respiratory irritation
H362- May cause harm to breastfed children
H373- May cause damage to organs through prolonged or repeated exposure

Prevention:
P102- Keep Out of Reach of Children
P202- Do not handle until all safety precautions have been read and understood
P210- Keep away from heat/sparks/open flames/hot surfaces-No Smoking
P211- Do not spray on an open flame or other ignition source
P251- Pressurized Container: Do not pierce or burn, even after use
P261- Avoid breathing vapors or fumes
P262- Do not get in eyes, on skin, or on clothing
P264- Wash hands and other skin areas exposed to material thoroughly after handling
P271- Use only outdoors or in a well-ventilated area
P280- Wear protective gloves, protective clothing and eye protection

P285- In case of inadequate ventilation wear respiratory protection

Response: P302+P352+P333+P313 IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention
P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314- Get medical advice if you feel unwell.
P342+P311- If experiencing respiratory symptoms: Call a POISON CENTER or doctor
P381- Eliminate all ignition sources if safe to do so

Storage: P403+P405- Store in a well-ventilated place. Store locked up.
P410- Protect from sunlight
P412- Do not expose to temperatures exceeding 50°C/122°F.

Disposal: P501 Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

SECTION 3- COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	Ingredient	CAS No.
40-70	Urethane Pre-Polymer Blend (Non-Hazardous Polyol Blend)	Not available
10-30	Alkanes, C14, chloro	198840-65-2
5-10	4,4' Diphenylmethane diisocyanate (MDI)	101-68-8
5-10	Polymethylene polyphenyl isocyanate (PMDI)	9016-87-9
3-7	Isobutane	75-28-5
3-7	Dimethyl ether	115-10-6
1-5	Propane	74-98-6

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

SECTION 4- FIRST AID MEASURES

4.1 Description of first aid measures

Eye: Immediately flush eyes with large amounts of water for at least 15 minutes, holding the eyes open with fingers and occasionally lifting the upper and lower lids. Use lukewarm water if possible. If present and easy to do so, remove contact lenses, If irritation persists, get medical attention.

Skin: In case of contact, immediately flush skin with plenty of soap and water. Foam will stick to skin, gently wipe product from skin with a damp cloth and wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation persists.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3 Notes to the physician

Symptoms may not appear immediately. If case of an accident or if you feel unwell, seek medical advice immediately (show label or SDS if possible).

SECTION 5- FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable methods of extinction: Use dry chemical, carbon dioxide, foam, Halon 1211 and water spray or fog.
Unsuitable methods of extinction: Do not use water jets and high-pressure water as these may spread the fire

5.2 Special hazards arising from the substance or mixture

Contains flammable propellant. Eliminate all ignition sources. Containers may explode due to buildup of pressure when exposed to extreme heat. Aerosol cans exposed to fire or high temperature can rupture and rocket. Cured foam will burn in the presence of heat, oxygen and an ignition source.

5.3 Advice to firefighters

Products of combustion: May include and are not limited to: oxides of carbon, oxides of nitrogen, hydrogen fluoride, and traces of hydrogen cyanide.

Keep upwind of fire. Wear full fire-fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Use water spray to keep fire-exposed containers cool. Containers may explode if heated.

SECTION 6- ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition.

6.2 Environmental precautions

Do not allow to enter sewers, drains, or waterways

6.3 Methods and materials for containment and cleaning up

Method for containment: Uncured product is very sticky; carefully remove the bulk of the foam by scraping it up and then immediately remove the residue with a rag and solvent such as Handi-Cleaner, mineral spirits, acetone (nail polish remover), paint thinner, etc. Once the product is cured it can only be removed mechanically by scraping, buffing, etc. Use appropriate PPE.

Methods for cleaning up: Scoop up material and place in a disposal container. Dispose of as plastic waste in accordance with all applicable guidelines and regulations. Vapors can accumulate in low areas. Provide ventilation

6.4 Reference to other sections

For indications about waste treatment & disposal, see Section 13

See Section 7 for information about safe handling.

SECTION 7- HANDLING AND STORAGE

7.1 Precautions for safe handling

Keep away from sources of ignition- No smoking. Do not spray on an open flame or other ignition source. Pressurized container: do not pierce or burn, even after use. Container may explode if heated. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray. Do not swallow. Use only in a well-ventilated area or outdoors. Avoid welding or other "hot work" in the vicinity of exposed cured foam. When using do not eat, drink or smoke. (See section 8)

General hygiene advice: Launder contaminated clothing before reuse. Wash hands before eating, drinking or smoking.

7.2 Conditions for safe storage including any incompatibilities

Store in a dry place. Ideal use temperature is 65°F to 80°F (18°C to 27°C). Do not expose aerosol cans to open flame or temperatures above 122°F (50°C). Excessive heat can cause premature aging of components resulting in a shorter shelf life. Storage below 55°F (12.7°C) may affect foam quality if chemicals are not warmed to room temperature before using. Protect containers from physical abuse. Keep containers upright. **Keep away from children.**

7.3 Other

NFPA 30B Manufacture and Storage of Aerosol Products- Aerosol Level II

SECTION 8- EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control Parameters

CAS No.	Ingredient	OSHA-PEL TWA	ACGIH-TLV	NIOSH	CA AB OEL CA BC OEL CA ON OEL CA QC OEL
101-68-8	4,4' Diphenylmethane diisocyanate	0.02 PPM; 0.2 mg/m^3 Ceiling	0.005 ppm; 0.051 mg/m^3 (8 hours) TWA	0.005 ppm; 0.050 mg/m^3 TWA 0.02 ppm; 0.2 mg/m^3 CEIL	AB- 0.05 mg/m^3 0.005 ppm BC- 0.005 ppm TWA; 0.01 ppm C ON- 0.005 ppm TWA 0.02 ppm C QC- 0.051 mg/ m$^{3\ 0.005}$ ppm TWAEV
75-28-5	Isobutane		1,000 ppm TWA	800 ppm; 1,900 mg/m^3 TWA	AB- 1,000 ppm TWA BC- 1,000 ppm TWA ON- 1,000 ppm TWA
115-10-6	Dimethyl ether	1,000 ppm (Dupont AEL)			BC- 1,000 ppm TWA ON- 1,000 ppm TWA
74-98-6	Propane	1,000 ppm; 1,800 mg/m^3 TWA	1,000 ppm; 1,800 mg/m^3 TWA	1,000 ppm; 1,800 mg/m^3 TWA	AB-1,000 ppm TWA BC-1,000 ppm TWA QC- 1,800 mg/m^3 1,000 ppm TWAEV

8.2 Exposure Controls:

Engineering measures: Use ventilation adequate to keep exposures below recommended exposure limits.
Eye/face Protection: Wear protective safety glasses with side shields or goggles.
Hand Protection: Use chemically resistant gloves (i.e. Nitrile gloves). Nitrile/butadiene rubber, butyl rubber, polyethylene, PVC (vinyl), or neoprene gloves are also effective. Glove selection should consider potential body reactions to certain materials and manufacturer's instructions for use. Break through time of selected gloves must be greater than the intended use period.
Other Protective Equipment: Use clothing that protects against dermal exposure. Appropriate protective clothing varies depending on the potential for exposure. To ensure proper skin protection, wear PPE in such a manner that no skin is exposed.
Respiratory Protection: If atmospheric levels are expected to exceed the exposure levels, use a NIOSH approved air purifying respirator equipped with an organic vapor cartridge and particulate filter. If atmospheric levels exceed 10 times the TLV or PEL level for which an air-purifying respirator is effective, use a powered air purifying respirator (PAPR). The type of respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134).
Hygiene Measures: An eye wash station or portable eye wash station should be in the area. Wash hands thoroughly after use, before eating, drinking or using the lavatory. Employees/Users should be educated and trained in the safe use and handling of this product.

SECTION 9- Physical and chemical properties

9.1 Information on basic physical and chemical properties	
General Physical Form	Viscous liquid which forms off-white to yellowish foam upon release.
Color	Crème. Some products contain a dye or colorant i.e. Fireblock is orange.
Odor	Slight hydrocarbon odor during curing stage
Odor Threshold:	No data available
Physical State:	Gas/Pressurized Liquid/Semi-Solid
pH:	No data available
Melting Point/Freezing Point	No data available
Initial Boiling Point and Boiling Range	No data available
Flash Point:	-156°F (-68.9°C), estimated based on liquefied petroleum gas (Hydrocarbon HC)
Evaporation Rate:	No data available
Flammability:	Flammable
Lower Flammability/Explosive Limit:	No data available
Upper Flammability/Explosive Limit:	No data available
Vapor Pressure	Aerosol product > 50 psig/ 345 kPa
	Final product (sprayed): Very low (not determined)
Vapor Density:	Not available
Relative Density/Specific Gravity:	~ 1.1 (Water = 1)
Solubility:	Insoluble; reacts slowly with water during cure, liberating traces of CO_2
Partition coefficient: n-octanol/water:	No data available
Auto-ignition Temperature:	No data available
Decomposition Temperature;	No data available
Viscosity:	No data available
Explosive Properties:	May be sensitive to mechanical impact or static discharge. Vapor released during and immediately after dispensing may accumulate and ignite explosively if proper ventilation is not employed. Extinguish or remove all sources of ignition during dispensing, until product becomes tack free or skins over.
Oxidizing Properties:	No data available
VOC Content (calculated minus exempt compounds and water)	165 g/l (Handi-Foam Fireblock West and Handi-Foam Window & Door West 160 g/l)

SECTION 10- STABILITY AND REACTIVITY

10.1 Reactivity
No dangerous reaction known under conditions of normal use.
10.2 Chemical Stability
Stable under normal storage conditions. Contents under pressure. Container may explode if heated. Do not pierce or burn, even after use. Avoid temperatures below 40°F (4°C). For longest shelf life, avoid storage above 100°F (38°C).
10.3 Possibility of Hazardous Reactions
Elevated temperatures can cause product to decompose, releasing carbon dioxide. Flammable propellant. Contents are under pressure and exposure to high temperature can cause containers to rupture or explode.
10.4 Conditions to Avoid
Heat. Incompatible materials. Sources of ignition. Avoid temperatures below 40°F (4°C) or temperatures above 100°F (38°C).
10.5 Incompatible Materials
Alcohols, strong bases, amines, metal compounds, ammonia, and strong oxidizers.
10.6 Hazardous Decomposition Products
See Section 5.2 for hazardous decomposition products due to combustion.

SECTION 11- TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological effects:

Signs and Symptoms of Exposure based on test data and/or information on the components, this material may produce the following health effects:

Eye: May cause eye irritation
Skin: May cause skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of skin. May cause an allergic reaction.
Inhalation: May be harmful if inhaled. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Ingestion: May be harmful if swallowed. May cause gastrointestinal irritation: stomach distress, nausea, or vomiting.
Chronic: Chlorinated paraffin (C14-C16) may cause harm to breastfed children.

Acute Oral Toxicity
Expected to have low acute oral toxicity
Acute inhalation toxicity
Expected to have low acute inhalation toxicity
Acute dermal toxicity
Expected to have low acute dermal toxicity
Skin irritation
Causes skin irritation
Eye irritation
Causes serious eye irritation
Sensitization
May cause skin and respiratory sensitization
Genotoxicity
Genetic toxicity data for MDI is inconclusive. Some in-vitro studies yielded positive results, while other test data was negative
Mutagenicity
Test data using laboratory animals was predominately negative
Specific organ toxicity- single exposure
May cause respiratory irritation
Specific organ toxicity- repeated exposure
May cause damage to the lungs, central nervous system and skin
Aspiration hazard
No data available

11.2 Delayed, Immediate, and Chronic Effects of Short- and Long-Term Exposure

MDI and PMDI: IARC Group 3 carcinogen- Not classifiable as to its carcinogenicity to humans. Not listed as a carcinogen by ACGIH, OSHA or NTP. MDI/PMDI did not cause birth defects in laboratory animals; fetal effects occurred only at high doses which were toxic to the mother. Lung tumors have been observed in laboratory animals exposed to respirable aerosol droplets of MDI/PMDI (6mg/m^3) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects. Chlorinated paraffins (C14-C16) may accumulate in body tissues and fluids rich in lipid content; therefore, this material may cause harm to breastfed children.

SECTION 12- ECOLOGICAL INFORMATION

12.1 Ecotoxicity

The aquatic toxicity of this product has not been experimentally determined. However, it is expected to have low acute aquatic toxicity based on the acute aquatic toxicity of the individual components and their concentration in this mixture.

12.2 Persistence and degradability

Product is not readily biodegradable. In aquatic and terrestrial environments, this material reacts with water

12.3 Bioaccumulative potential

Bioaccumulation potential is low

12.4 Mobility in soil

Expected to have low mobility based on product's reactivity with water

12.5 Other Adverse Effects

Propellant: Ozone Depletion Potential- 0; Global Warming Potential- 1

SECTION 13- DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Methods of disposal
Before disposing of containers, relieve container of any remaining foam and pressure. Allow dispensed product to fully cure before disposing. Never discard in a liquid state. This material must be disposed of in accordance with all local, regional, national, international regulations.

Other disposal recommendations:
Do not puncture or incinerate containers. Use appropriate Personal Protective Equipment.

SECTION 14- TRANSPORTATION

Shipping Information

Ground	Limited Quantity
Air	UN1950 Aerosols, Flammable 2.1 (Flammable Gas Label) LIMITED QUANTITY Packing Instructions (Cargo & Passenger) 203
Water	UN1950 Aerosols, Flammable 2.1 (Flammable Gas Label) LIMITED QUANTITY

SECTION 15- REGULATORY

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

U.S. Federal Regulations

OSHA Hazard Communication Standard: This material is classified as a hazardous in accordance with OSHA 29 CFR 1910-1200
TSCA Status: All components of the mixture on the TSCA 8(b) inventory are designated "active".
Toxic Substances Control Act (TSCA) All components of the mixture on the TSCA 8(b) inventory are designated "active".
US TSCA Section 5(a)(2) Proposed Significant New Use Rules (SNURs): Listed substance
Alkanes, C14, chloro (CAS 198840-65-2) 40 CFR 721.11073
US TSCA Section 5(e) PMN-Substance Consent Orders: Listed substance
Alkanes, C14, chloro (CAS 198840-65-2) P12283, P14683
TSCA Section 12(b) Export Notification (40 CFR 707, Subpart D)
Alkanes, C14, chloro (CAS 198840-65-2) 1.0 % containing products or more are subject to export notifications. Export notification requirements are per export per country as required under 40 C.F.R. §707.65(a)(2)(ii).
Superfund Amendments and Reauthorization Act (SARA)
SARA Section 311/312 Hazard Categories: Acute Health Hazard, Chronic Health Hazard, Fire Hazard, Reactive Hazard, Sudden Release of Pressure Hazard
SARA 313 Information: MDI and PMDI are subject to reporting levels established by Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986.
SARA 302/304 Extremely Hazardous Substance: No components of the product exceed the threshold (de minimis) reporting levels established by these sections of the Title III of SARA.
SARA 302/304 Emergency Planning & Notification: No components of the product exceed the threshold (de minimis) report levels established by these sections of the Title III of SARA.
Comprehensive Response Compensation and Liability Act (CERCLA): This product contains the following CERCLA reportable substances: 4,4'- Diphenylmethane diisocyanate (CAS #101-68-8), RQ- 2,268 kg (5,000 lbs).
Clean Air Act (CAA) - 4,4'- Diphenylmethane diisocyanate (CAS #101-68-8) is listed as a Hazardous Air Pollutant (HAP) designated in CAA Section 112 (b). This product does not contain any Class 1 or Class 2 Ozone depletors.
Clean Water Act (CWA) - 4,4'- Diphenylmethane diisocyanate (CAS #101-68-8) is listed as a Hazardous Substance under the CWA. None of the chemicals in these products are listed as Priority Pollutants under the CWA. None of the chemicals listed in these products are listed as Toxic Pollutants under the CWA.

U.S. State Regulations:

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986: None of the chemicals are listed.
Other U.S. State Inventories:
4, 4'- Diphenylmethane diisocyanate (CAS #101-68-8) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/air Pollutants lists: CA, DE, ID, IL, ME, MA, MN, NJ, PA, WA, WI
Polymeric MDI (CAS #9016-87-9) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: DE, NJ, MN
Isobutane (CAS #75-28-5) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: DE, ME, MA, MN, NJ, PA
Dimethyl ether (CAS #115-10-6) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: DE, ME, MA, MN, NJ, PA
Propane (CAS #74-98-6) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air

Pollutants lists: DE, MA, MN, NJ, PA, WA

Canada
Consumer Chemicals & Containers Regulation Hazard Symbols:

Flammable

Pressurized Container

Canada Controlled Product Regulations (CPR): This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation, and the SDS contains all the information required by the Controlled Products Regulations.
Canadian Ingredient Disclosure List (IDL): 4,4'- Diphenylmethane diisocyanate (CAS #101-68-8) is listed on the IDL.
Canadian National Pollutant Release Inventory (NPRI): MDI and PMDI are listed on the NPRI

Global Chemical Inventory Lists:
United States: Toxic Substance Control Act (TSCA)- Yes
Canada: Domestic Substances List (DSL)- Yes
Canada: Non-Domestic Substances List (NDSL)- No

15.2 Chemical safety assessment: For this product a chemical safety assessment was not carried out

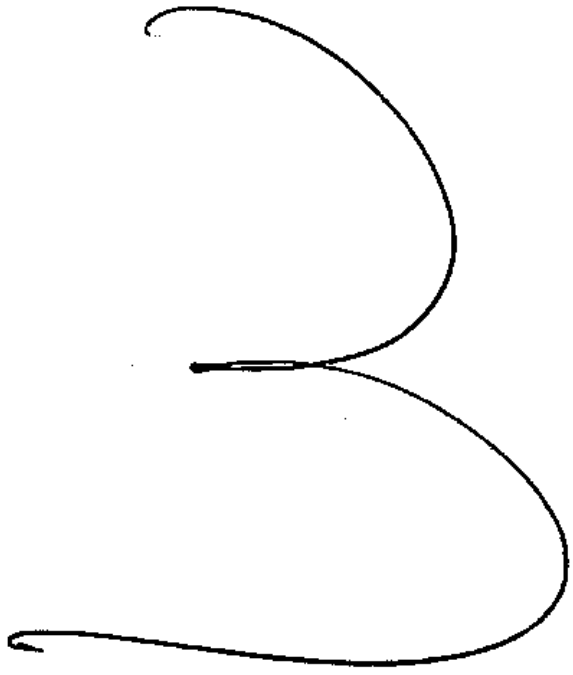
SECTION 16- OTHER

NFPA: Health Hazard 2; Flammability 3; Reactivity 1
HMIS: Health Hazard 2; Flammability 3; Physical Hazard 1
Hazard Rating: 0=minimal, 1= slight, 2=moderate, 3=severe, 4= extreme

Legend:
ACGIH- American Conference of Governmental Industrial Hygienists
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
C- Ceiling Limit
CA AB OEL- Alberta, Canada Occupational Exposure Limit
CA BC OEL- British Columbia, Canada Occupational Exposure Limit
CA ON OEL- Ontario, Canada Occupational Exposure Limit
CA QC OEL- Quebec, Canada Occupational Exposure Limit
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DOT: US Department of Transportation
IATA: International Air Transport Association
IMDG: International Maritime Code for Dangerous Goods
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
STEL- Short Term exposure limit
TWA- Time weighted average
TWAEV- Time weighted average exposure value
WEEL- US workplace environmental exposure levels

The information and recommendations set forth herein are presented in good faith and believed to be correct as of the date hereof. The manufacturer makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving it will make their own determination as to its suitability for their purposes prior to use. In no event will the manufacturer be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. No representations or warranties, either expressed or implied, of merchantability or fitness for a particular use are made hereunder with respect to this information or the product to which information refers.
Information contained herein is deemed to be reliable, conservative and accurate. ICP Building Solutions Group reserves the right to change the design, specifications or any other features at any time and without notice, while otherwise maintaining regulatory compliance.

Revision- February 24, 2021 Version 2.8 (Replaces Version 2.7- September 12, 2018)



SAFETY DATA SHEET
LOW PRESSURE POLYURETHANE FOAM SEALANTS (HC)

SECTION 1- PRODUCT AND COMPANY IDENTIFICATION

..1 Product Identifier

Product Name: HandiFoam® HC Gun Foam, HandiFoam® HC Straw Foam, HandiFoam® Fireblock, HandiFoam® Fireblock West, HandiFoam® Black, HandiFoam® Extreme, HandiFoam® Window & Door, HandiFoam® Window & Door West and HandiFoam® Extreme Window & Door Polyurethane Foam Sealants

SDS ID Number **A16186**

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

General Use: One Component Polyurethane Foam Sealant

Uses advised against

1.3 Details of the supplier and of the safety data sheet

Manufacturer: ICP Building Solutions Group
2775 Barber Road
Norton, Ohio 44203
In Ohio: 330-753-4585; 1-800-321-5585 (Monday-Friday 8:00am-5:00pm EST)

1.4 Emergency telephone numbers

In the U.S.A: CHEMTEL 1-800-255-3924

International Emergency: CHEMTEL 1-813-248-0585

SECTION 2- HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Product definition: Mixture

Classification:
Flammable Aerosol- Category 1
Gases Under Pressure- Compressed Gas
Acute Toxicity Inhalation- Category 4
Skin Irritation- Category 2
Serious Eye Irritation- Category 2A
Respiratory Sensitizing- Category 1
Skin Sensitization – Category 1
Effects on or via lactation
Specific Target Organ Toxicity SE 3
Specific Target Organ Toxicity RE 2

2.2 Label elements

Hazard Symbols:

Signal Word: **DANGER**

Hazard Statements:
H222- Extremely flammable aerosol
H280- Contains gas under pressure; may explode if heated
H315- Causes Skin Irritation
H317- May cause an allergic skin reaction
H319- Causes Serious Eye Irritation
H332- Harmful if inhaled
H334- May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335- May cause respiratory irritation
H362- May cause harm to breastfed children
H373- May cause damage to organs through prolonged or repeated exposure

Prevention:
P102- Keep Out of Reach of Children
P202- Do not handle until all safety precautions have been read and understood
P210- Keep away from heat/sparks/open flames/hot surfaces-No Smoking
P211- Do not spray on an open flame or other ignition source
P251- Pressurized Container: Do not pierce or burn, even after use
P261- Avoid breathing vapors or fumes
P262- Do not get in eyes, on skin, or on clothing
P264- Wash hands and other skin areas exposed to material thoroughly after handling
P271- Use only outdoors or in a well-ventilated area
P280- Wear protective gloves, protective clothing and eye protection

P285- In case of inadequate ventilation wear respiratory protection

Response:
P302+P352+P333+P313 IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention
P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314- Get medical advice if you feel unwell.
P342+P311- If experiencing respiratory symptoms: Call a POISON CENTER or doctor
P381- Eliminate all ignition sources if safe to do so

Storage:
P403+P405- Store in a well-ventilated place. Store locked up.
P410- Protect from sunlight
P412- Do not expose to temperatures exceeding 50°C/122°F.

Disposal:
P501 Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

SECTION 3- COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	Ingredient	CAS No.
40-70	Urethane Pre-Polymer Blend (Non-Hazardous Polyol Blend)	Not available
10-30	Alkanes, C14, chloro	198840-65-2
5-10	4,4' Diphenylmethane diisocyanate (MDI)	101-68-8
5-10	Polymethylene polyphenyl isocyanate (PMDI)	9016-87-9
3-7	Isobutane	75-28-5
3-7	Dimethyl ether	115-10-6
1-5	Propane	74-98-6

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

SECTION 4- FIRST AID MEASURES

4.1 Description of first aid measures

Eye: Immediately flush eyes with large amounts of water for at least 15 minutes, holding the eyes open with fingers and occasionally lifting the upper and lower lids. Use lukewarm water if possible. If present and easy to do so, remove contact lenses, If irritation persists, get medical attention.

Skin: In case of contact, immediately flush skin with plenty of soap and water. Foam will stick to skin, gently wipe product from skin with a damp cloth and wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation persists.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3 Notes to the physician

Symptoms may not appear immediately. If case of an accident or if you feel unwell, seek medical advice immediately (show label or SDS if possible).

SECTION 5- FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable methods of extinction: Use dry chemical, carbon dioxide, foam, Halon 1211 and water spray or fog.
Unsuitable methods of extinction: Do not use water jets and high-pressure water as these may spread the fire

5.2 Special hazards arising from the substance or mixture

Contains flammable propellant. Eliminate all ignition sources. Containers may explode due to buildup of pressure when exposed to extreme heat. Aerosol cans exposed to fire or high temperature can rupture and rocket. Cured foam will burn in the presence of heat, oxygen and an ignition source.

5.3 Advice to firefighters

Products of combustion: May include and are not limited to: oxides of carbon, oxides of nitrogen, hydrogen fluoride, and traces of hydrogen cyanide.

Keep upwind of fire. Wear full fire-fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Use water spray to keep fire-exposed containers cool. Containers may explode if heated.

SECTION 6- ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition.

6.2 Environmental precautions

Do not allow to enter sewers, drains, or waterways

6.3 Methods and materials for containment and cleaning up

Method for containment: Uncured product is very sticky; carefully remove the bulk of the foam by scraping it up and then immediately remove the residue with a rag and solvent such as Handi-Cleaner, mineral spirits, acetone (nail polish remover), paint thinner, etc. Once the product is cured it can only be removed mechanically by scraping, buffing, etc. Use appropriate PPE.

Methods for cleaning up: Scoop up material and place in a disposal container. Dispose of as plastic waste in accordance with all applicable guidelines and regulations. Vapors can accumulate in low areas. Provide ventilation

6.4 Reference to other sections

For indications about waste treatment & disposal, see Section 13

See Section 7 for information about safe handling.

SECTION 7- HANDLING AND STORAGE

7.1 Precautions for safe handling

Keep away from sources of ignition- No smoking. Do not spray on an open flame or other ignition source. Pressurized container: do not pierce or burn, even after use. Container may explode if heated. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray. Do not swallow. Use only in a well-ventilated area or outdoors. Avoid welding or other "hot work" in the vicinity of exposed cured foam. When using do not eat, drink or smoke. (See section 8)

General hygiene advice: Launder contaminated clothing before reuse. Wash hands before eating, drinking or smoking.

7.2 Conditions for safe storage including any incompatibilities

Store in a dry place. Ideal use temperature is 65°F to 80°F (18°C to 27°C). Do not expose aerosol cans to open flame or temperatures above 122°F (50°C). Excessive heat can cause premature aging of components resulting in a shorter shelf life. Storage below 55°F (12.7°C) may affect foam quality if chemicals are not warmed to room temperature before using. Protect containers from physical abuse. Keep containers upright. **Keep away from children.**

7.3 Other

NFPA 30B Manufacture and Storage of Aerosol Products- Aerosol Level II

SECTION 8- EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control Parameters

CAS No.	Ingredient	OSHA-PEL TWA	ACGIH-TLV	NIOSH	CA AB OEL CA BC OEL CA ON OEL CA QC OEL
101-68-8	4,4' Diphenylmethane diisocyanate	0.02 PPM; 0.2 mg/m^3 Ceiling	0.005 ppm; 0.051 mg/m^3 (8 hours) TWA	0.005 ppm; 0.050 mg/m^3 TWA 0.02 ppm; 0.2 mg/m^3 CEIL	AB- 0.05 mg/m^3 0.005 ppm BC- 0.005 ppm TWA; 0.01 ppm C ON- 0.005 ppm TWA 0.02 ppm C QC- 0.051 mg/ m$^{3\,0.005}$ ppm TWAEV
75-28-5	Isobutane		1,000 ppm TWA	800 ppm; 1,900 mg/m^3 TWA	AB- 1,000 ppm TWA BC- 1,000 ppm TWA ON- 1,000 ppm TWA
115-10-6	Dimethyl ether	1,000 ppm (Dupont AEL)			BC- 1,000 ppm TWA ON- 1,000 ppm TWA
74-98-6	Propane	1,000 ppm; 1,800 mg/m^3 TWA	1,000 ppm; 1,800 mg/m^3 TWA	1,000 ppm; 1,800 mg/m^3 TWA	AB-1,000 ppm TWA BC-1,000 ppm TWA QC- 1,800 mg/m^3 1,000 ppm TWAEV

8.2 Exposure Controls:

Engineering measures: Use ventilation adequate to keep exposures below recommended exposure limits.

Eye/face Protection: Wear protective safety glasses with side shields or goggles.

Hand Protection: Use chemically resistant gloves (i.e. Nitrile gloves). Nitrile/butadiene rubber, butyl rubber, polyethylene, PVC (vinyl), or neoprene gloves are also effective. Glove selection should consider potential body reactions to certain materials and manufacturer's instructions for use. Break through time of selected gloves must be greater than the intended use period.

Other Protective Equipment: Use clothing that protects against dermal exposure. Appropriate protective clothing varies depending on the potential for exposure. To ensure proper skin protection, wear PPE in such a manner that no skin is exposed.

Respiratory Protection: If atmospheric levels are expected to exceed the exposure levels, use a NIOSH approved air purifying respirator equipped with an organic vapor cartridge and particulate filter. If atmospheric levels exceed 10 times the TLV or PEL level for which an air-purifying respirator is effective, use a powered air purifying respirator (PAPR). The type of respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134).

Hygiene Measures: An eye wash station or portable eye wash station should be in the area. Wash hands thoroughly after use, before eating, drinking or using the lavatory. Employees/Users should be educated and trained in the safe use and handling of this product.

SECTION 9- Physical and chemical properties

9.1 Information on basic physical and chemical properties	
General Physical Form	Viscous liquid which forms off-white to yellowish foam upon release.
Color	Crème. Some products contain a dye or colorant i.e. Fireblock is orange.
Odor	Slight hydrocarbon odor during curing stage
Odor Threshold:	No data available
Physical State:	Gas/Pressurized Liquid/Semi-Solid
pH:	No data available
Melting Point/Freezing Point	No data available
Initial Boiling Point and Boiling Range	No data available
Flash Point:	-156°F (-68.9°C), estimated based on liquefied petroleum gas (Hydrocarbon HC)
Evaporation Rate:	No data available
Flammability:	Flammable
Lower Flammability/Explosive Limit:	No data available
Upper Flammability/Explosive Limit:	No data available
Vapor Pressure	Aerosol product > 50 psig/ 345 kPa
	Final product (sprayed): Very low (not determined)
Vapor Density:	Not available
Relative Density/Specific Gravity:	~ 1.1 (Water = 1)
Solubility:	Insoluble; reacts slowly with water during cure, liberating traces of CO_2
Partition coefficient: n-octanol/water:	No data available
Auto-ignition Temperature:	No data available
Decomposition Temperature;	No data available
Viscosity:	No data available
Explosive Properties:	May be sensitive to mechanical impact or static discharge. Vapor released during and immediately after dispensing may accumulate and ignite explosively if proper ventilation is not employed. Extinguish or remove all sources of ignition during dispensing, until product becomes tack free or skins over.
Oxidizing Properties:	No data available
VOC Content (calculated minus exempt compounds and water)	165 g/l (Handi-Foam Fireblock West and Handi-Foam Window & Door West 160 g/l)

SECTION 10- STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical Stability

Stable under normal storage conditions. Contents under pressure. Container may explode if heated. Do not pierce or burn, even after use. Avoid temperatures below 40°F (4°C). For longest shelf life, avoid storage above 100°F (38°C).

10.3 Possibility of Hazardous Reactions

Elevated temperatures can cause product to decompose, releasing carbon dioxide. Flammable propellant. Contents are under pressure and exposure to high temperature can cause containers to rupture or explode.

10.4 Conditions to Avoid

Heat. Incompatible materials. Sources of ignition. Avoid temperatures below 40°F (4°C) or temperatures above 100°F (38°C).

10.5 Incompatible Materials

Alcohols, strong bases, amines, metal compounds, ammonia, and strong oxidizers.

10.6 Hazardous Decomposition Products

See Section 5.2 for hazardous decomposition products due to combustion.

SECTION 11- TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological effects:

Signs and Symptoms of Exposure based on test data and/or information on the components, this material may produce the following health effects:

Eye: May cause eye irritation
Skin: May cause skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of skin. May cause an allergic reaction.
Inhalation: May be harmful if inhaled. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Ingestion: May be harmful if swallowed. May cause gastrointestinal irritation: stomach distress, nausea, or vomiting.
Chronic: Chlorinated paraffin (C14-C16) may cause harm to breastfed children.

Acute Oral Toxicity
Expected to have low acute oral toxicity
Acute inhalation toxicity
Expected to have low acute inhalation toxicity
Acute dermal toxicity
Expected to have low acute dermal toxicity
Skin irritation
Causes skin irritation
Eye irritation
Causes serious eye irritation
Sensitization
May cause skin and respiratory sensitization
Genotoxicity
Genetic toxicity data for MDI is inconclusive. Some in-vitro studies yielded positive results, while other test data was negative
Mutagenicity
Test data using laboratory animals was predominately negative
ecific organ toxicity- single exposure
ay cause respiratory irritation
Specific organ toxicity- repeated exposure
May cause damage to the lungs, central nervous system and skin
Aspiration hazard
No data available

11.2 Delayed, Immediate, and Chronic Effects of Short- and Long-Term Exposure

MDI and PMDI: IARC Group 3 carcinogen- Not classifiable as to its carcinogenicity to humans. Not listed as a carcinogen by ACGIH, OSHA or NTP. MDI/PMDI did not cause birth defects in laboratory animals; fetal effects occurred only at high doses which were toxic to the mother. Lung tumors have been observed in laboratory animals exposed to respirable aerosol droplets of MDI/PMDI (6mg/m^3) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects. Chlorinated paraffins (C14-C16) may accumulate in body tissues and fluids rich in lipid content; therefore, this material may cause harm to breastfed children.

SECTION 12- ECOLOGICAL INFORMATION

12.1 Ecotoxicity

The aquatic toxicity of this product has not been experimentally determined. However, it is expected to have low acute aquatic toxicity based on the acute aquatic toxicity of the individual components and their concentration in this mixture.

12.2 Persistence and degradability

Product is not readily biodegradable. In aquatic and terrestrial environments, this material reacts with water

12.3 Bioaccumulative potential

Bioaccumulation potential is low

12.4 Mobility in soil

Expected to have low mobility based on product's reactivity with water

12.5 Other Adverse Effects

Propellant: Ozone Depletion Potential- 0; Global Warming Potential- 1

SECTION 13- DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Methods of disposal

Before disposing of containers, relieve container of any remaining foam and pressure. Allow dispensed product to fully cure before disposing. Never discard in a liquid state. This material must be disposed of in accordance with all local, regional, national, international regulations.

Other disposal recommendations:
Do not puncture or incinerate containers. Use appropriate Personal Protective Equipment.

SECTION 14- TRANSPORTATION

Shipping Information

Ground	Limited Quantity
Air	UN1950 Aerosols, Flammable 2.1 (Flammable Gas Label) LIMITED QUANTITY Packing Instructions (Cargo & Passenger) 203
Water	UN1950 Aerosols, Flammable 2.1 (Flammable Gas Label) LIMITED QUANTITY

SECTION 15- REGULATORY

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

U.S. Federal Regulations
OSHA Hazard Communication Standard: This material is classified as a hazardous in accordance with OSHA 29 CFR 1910-1200
TSCA Status: All components of the mixture on the TSCA 8(b) inventory are designated "active".
Toxic Substances Control Act (TSCA) All components of the mixture on the TSCA 8(b) inventory are designated "active".
US TSCA Section 5(a)(2) Proposed Significant New Use Rules (SNURs): Listed substance
Alkanes, C14, chloro (CAS 198840-65-2) 40 CFR 721.11073
US TSCA Section 5(e) PMN-Substance Consent Orders: Listed substance
Alkanes, C14, chloro (CAS 198840-65-2) P12283, P14683
TSCA Section 12(b) Export Notification (40 CFR 707, Subpart D)
Alkanes, C14, chloro (CAS 198840-65-2) 1.0 % containing products or more are subject to export notifications. Export notification requirements are per export per country as required under 40 C.F.R. §707.65(a)(2)(ii).
Superfund Amendments and Reauthorization Act (SARA)
SARA Section 311/312 Hazard Categories: Acute Health Hazard, Chronic Health Hazard, Fire Hazard, Reactive Hazard, Sudden Release of Pressure Hazard
SARA 313 Information: MDI and PMDI are subject to reporting levels established by Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986.
SARA 302/304 Extremely Hazardous Substance: No components of the product exceed the threshold (de minimis) reporting levels established by these sections of the Title III of SARA.
SARA 302/304 Emergency Planning & Notification: No components of the product exceed the threshold (de minimis) report levels established by these sections of the Title III of SARA.
Comprehensive Response Compensation and Liability Act (CERCLA): This product contains the following CERCLA reportable substances: 4,4'- Diphenylmethane diisocyanate (CAS #101-68-8), RQ- 2,268 kg (5,000 lbs).
Clean Air Act (CAA) - 4,4'- Diphenylmethane diisocyanate (CAS #101-68-8) is listed as a Hazardous Air Pollutant (HAP) designated in CAA Section 112 (b). This product does not contain any Class 1 or Class 2 Ozone depletors.
Clean Water Act (CWA) - 4,4'- Diphenylmethane diisocyanate (CAS #101-68-8) is listed as a Hazardous Substance under the CWA. None of the chemicals in these products are listed as Priority Pollutants under the CWA. None of the chemicals listed in these products are listed as Toxic Pollutants under the CWA.

U.S. State Regulations:
California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986: None of the chemicals are listed.
Other U.S. State Inventories:
4, 4'- Diphenylmethane diisocyanate (CAS #101-68-8) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/air Pollutants lists: CA, DE, ID, IL, ME, MA, MN, NJ, PA, WA, WI
Polymeric MDI (CAS #9016-87-9) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: DE, NJ, MN
Isobutane (CAS #75-28-5) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: DE, ME, MA, MN, NJ, PA
Dimethyl ether (CAS #115-10-6) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: DE, ME, MA, MN, NJ, PA
Propane (CAS #74-98-6) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air

Pollutants lists: DE, MA, MN, NJ, PA, WA

Canada
Consumer Chemicals & Containers Regulation Hazard Symbols:

Flammable

Pressurized Container

Canada Controlled Product Regulations (CPR): This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation, and the SDS contains all the information required by the Controlled Products Regulations.
Canadian Ingredient Disclosure List (IDL): 4,4'- Diphenylmethane diisocyanate (CAS #101-68-8) is listed on the IDL.
Canadian National Pollutant Release Inventory (NPRI): MDI and PMDI are listed on the NPRI

Global Chemical Inventory Lists:
United States: Toxic Substance Control Act (TSCA)- Yes
Canada: Domestic Substances List (DSL)- Yes
Canada: Non-Domestic Substances List (NDSL)- No

15.2 Chemical safety assessment: For this product a chemical safety assessment was not carried out

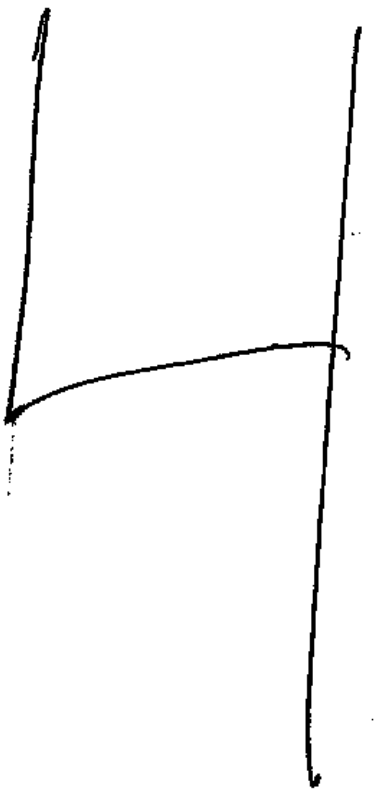
SECTION 16- OTHER

NFPA: Health Hazard 2; Flammability 3; Reactivity 1
HMIS: Health Hazard 2; Flammability 3; Physical Hazard 1
Hazard Rating: 0=minimal, 1= slight, 2=moderate, 3=severe, 4= extreme

Legend:
ACGIH- American Conference of Governmental Industrial Hygienists
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
C- Ceiling Limit
CA AB OEL- Alberta, Canada Occupational Exposure Limit
CA BC OEL- British Columbia, Canada Occupational Exposure Limit
CA ON OEL- Ontario, Canada Occupational Exposure Limit
CA QC OEL- Quebec, Canada Occupational Exposure Limit
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DOT: US Department of Transportation
IATA: International Air Transport Association
IMDG: International Maritime Code for Dangerous Goods
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
STEL- Short Term exposure limit
TWA- Time weighted average
TWAEV- Time weighted average exposure value
WEEL- US workplace environmental exposure levels

The information and recommendations set forth herein are presented in good faith and believed to be correct as of the date hereof. The manufacturer makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving it will make their own determination as to its suitability for their purposes prior to use. In no event will the manufacturer be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. No representations or warranties, either expressed or implied, of merchantability or fitness for a particular use are made hereunder with respect to this information or the product to which information refers.
Information contained herein is deemed to be reliable, conservative and accurate. ICP Building Solutions Group reserves the right to change the design, specifications or any other features at any time and without notice, while otherwise maintaining regulatory compliance.

Revision- February 24, 2021 Version 2.8 (Replaces Version 2.7- September 12, 2018)



Safety Data Sheet

Issue Date: 07-Jan-2021 **Revision Date:** 07-Jan-2021 **Version** 1

1. IDENTIFICATION

Product identifier

Product Name RMR-Neutralizer Chlorine Odor Eliminator

Other means of identification

SDS # RMR-002

Recommended use of the chemical and restrictions on use

Recommended Use Eliminates odors and fumes associated with chlorine based products.

Details of the supplier of the safety data sheet

Supplier Address
RMR Solutions
301 Appian Way
Brighton, MI 48116
Ph: 866-822-8744
Fax: 810-227-5595
Website: rmrsolutions.com

Emergency telephone number

Emergency Telephone Chemtel 800-255-3924

2. HAZARDS IDENTIFICATION

Appearance Crystals **Physical state** Solid **Odor** According to product specification

Classification

This chemical does not meet the hazardous criteria set forth by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). However, this Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
Sodium Thiosulfate Pentahydrate	10102-17-7	100

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General Advice Provide this SDS to medical personnel for treatment.

Eye Contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes.

Inhalation	Remove to fresh air.
Ingestion	Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

Symptoms	See Section 11: Toxicological Information of this SDS for more detailed symptoms.

Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media	Not determined.

Specific Hazards Arising from the Chemical
Not determined.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	Use personal protective equipment as required.

Environmental precautions

Environmental precautions	See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Clean-Up	Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling	Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.
Incompatible Materials	None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Appropriate engineering controls

Engineering Controls Apply technical measures to comply with the occupational exposure limits.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Refer to 29 CFR 1910.133 for eye and face protection regulations.

Skin and Body Protection Refer to 29 CFR 1910.138 for appropriate skin and body protection.

Respiratory Protection Refer to 29 CFR 1910.134 for respiratory protection requirements.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Solid		
Appearance	Crystals	**Odor**	According to product specification
Color	According to product specification	**Odor Threshold**	Not determined

Property	**Values**	**Remarks • Method**
pH	Not determined	
Melting point / freezing point	Not determined	
Boiling point / boiling range	Not determined	
Flash point	Not determined	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Not determined	
Flammability Limit in Air		
Upper flammability or explosive limits	Not determined	
Lower flammability or explosive limits	Not determined	
Vapor Pressure	Not determined	
Vapor Density	Not determined	
Relative Density	Not determined	
Water Solubility	Not determined	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Autoignition temperature	Not determined	
Decomposition temperature	Not determined	
Kinematic viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Methods and materials for containment and cleaning up:

- **Land**: Shovel, sweep, or vacuum product. Place in disposal container. Avoid bodies of water.
- **Water**: Large quantities may cause localized contamination of surrounding waters depending on the quantity spilled.

Reference to other sections:

- Refer to regulatory information in Section 15 for additional information regarding EPA and California regulations.

SECTION 7 – HANDLING AND STORAGE

Precautions for safe handling:

- **General:** No special handling is required. Storage of sealed bags in a dry, indoor location is recommended. To maintain product integrity, handle on a "first-in-first-out" basis. Use good housekeeping and engineering controls so that dust levels are below the exposure limits listed in Section 3.

Conditions for safe storage, including any incompatibilities:

- **Storage Temperature:** Ambient
- **Storage Pressure:** Atmospheric
- **Special Sensitivity:** None

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control parameters

This product is listed/regulated by OSHA and Cal/OSHA as "Particulates Not Otherwise Regulated" or "Nuisance Dust." This product is list by ACGIH as "Particulates Not Otherwise Specified."

COMPONENT/CAS #	EXPOSURE LIMITS
Newsprint **(Cellulose Fiber)** **#65996-61-4**	OSHA PEL-TWA=15mg/m^3 total dust (PNOR) ***PNOR - Particulates Not Otherwise Regulated or Nuisance Dust*** OSHA PEL-TWA=5mg/m^3 respirable fraction (PNOR) Cal OSHA PEL=10mg/m^3 total dust (PNOR) ACGIH TLV-TWA=10mg/m^3 inhalable (PNOS) ***PNOS – Particulates Not Otherwise Specified*** ACGIH TLV-TWA=3mg/m^3 respirable (PNOS)
Boric Acid **H_3BO_3** **#10043-35-3**	OSHA PEL-TWA=15mg/m^3 total dust (PNOR) OSHA PEL-TWA=5mg/m^3 respirable fraction (PNOR) Cal OSHA PEL=5mg/m^3 ACGIH TLV-TWA=2mg/m^3 ACGIH TLV-STEL=6mg/m^3 (inhalable fraction – Borate Compounds, inorganic)
Calcium Sulphate Dihydrate **#10101-41-4**	OSHA PEL-TWA=15mg/m^3 total dust (PNOR) ACGIH TLV-TWA=10mg/m^3 inhalable (PNOS)
Amylopectin **#113894-91-0**	OSHA PEL-TWA=15mg/m^3 total dust (PNOR) OSHA PEL TWA=5mg/m^3 respirable fraction (PNOR)
Distillate Mineral Oil **#8042-47-5**	None (Oil mist exposure not applicable in finished product)

Appropriate engineering controls:

- **General Exposure Controls:** No specific controls are needed. Use standard good housekeeping practices and engineering controls to minimize nuisance levels.
- **Ventilation**: Normal and adequate ventilation.

Individual protection measures, such as personal protective equipment:

- **Respiratory Protection:** If housekeeping and engineering controls do not maintain nuisance levels below regulatory limits or dust concentration is unknown, use a NIOSH-approved mask.
- **Eye Protection:** Wear ANSI Z.87.1 approved eye protection if environment is excessively dusty.
- **Hand Protection:** If skin is broken or sensitive, use gloves.
- **Other Protective Clothing:** If skin is broken or sensitive, cover with appropriate clothing.
- **Work/Hygienic Practices:** Standard hygienic practices.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance:** Gray/Brown
- **Odor:** Odorless
- **Odor Threshold:** N/A
- **pH**: <8.2 (2% suspension @ 25° C)
- **Melting Point/Freezing Point:** N/A
- **Initial Boiling Point and Boiling Range:** N/A
- **Flash Point:** N/A
- **Evaporation Rate:** N/A
- **Flammability (solid, gas):** N/A
- **Upper/Lower Flammability or Explosive Limits:** N/A
- **Vapor Pressure:** Negligible @ 20° C
- **Vapor Density:** N/A
- **Relative Density:** 9 LB/FT^3 compressed
- **Solubility(ies):** Not Soluble
- **Partition Coefficient: n-octanol/water:** N/A
- **Auto-Ignition Temperature:** N/A
- **Decomposition temperature:** Unknown
- **Viscosity:** N/A

SECTION 10 – STABILITY AND REACTIVITY

- **Reactivity:** None Known
- **Chemical Stability:** Stable
- **Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- **Conditions to Avoid** (e.g., static discharge, shock, or vibration): Reaction with strong reducing agents such as metal hydrides or alkali metals will generate hydrogen gas which could create an explosive hazard. Keep away from strong oxidizers, such as concentrated nitric acid, hydrogen peroxide, and chlorine.
- **Incompatible Materials:** None known
- **Hazardous Decomposition Products:** None known

SECTION 11 – TOXICOLOGICAL INFORMATION

Toxicological information: No toxicological data is available for the product. Toxicological information for components of this product is listed below.

Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact):

NEWSPRINT (Cellulose Fiber)

- **Eye Irritation:** None reported
- **Skin Irritation:** None reported
- **Acute Oral Toxicity:** None reported
- **Acute Inhalation Toxicity:** LC50, rat, =5,800 mg/m^3/4 hours
- **Sub Chronic:** None reported
- **Chronic:** None reported
- **Teratology:** None reported
- **Reproduction:** None reported
- **Germ Cell Mutagenicity:** None reported
- **Carcinogenicity:** None reported

BORIC ACID:

- **Eye Irritation:** Not irritating, corneal involvement or irritation clearing in 7 days. Classification: Based on mean scores < 1, and the effects were fully reversible within 7 days, the classification criteria are not met. Many years of occupational exposure indicate no adverse effects on human eye.
- **Skin Irritation:** Minor skin irritant Based on exposure of 72hrs/15mg. Based on the available data, the classification criteria are not met.
- **Acute Oral Toxicity:** Low acute oral toxicity. The oral LD_{50} value in male rats is 3,450 mg/kg bw, and in female rats is 4080 mg/kg bw.
- **Acute Inhalation Toxicity:** Low acute inhalation toxicity; LC_{50} in rats is > 2.0 mg/l (or g/m^3). Based on the available data, the classification criteria are not met.
- **Acute Dermal Toxicity:** Low acute dermal toxicity; LD_{50} in rabbits is > 2,000 mg/kg of body weight. Poorly absorbed through intact skin. Based on the available data, the classification criteria are not met.
- **Reproduction:** Borate-treated cellulose insulation contains boric acid and cellulose fiber. Borate-treated cellulose insulation was tested for purposes of hazard classification under the Occupational Safety and Health Administration's 2012 Hazard Communication Standard. In a study conducted under OECD Guideline 414, there were no developmental effects in rats exposed to up to 270 mg/m3 (the highest exposure tested). In workers Chronically exposed to high levels of borates for several years by way of inhalation, food, and drinking water, there was a clear absence of any reproductive effects.
- **Germ Cell Mutagenicity:** Not mutagenic. Based on the available data, the classification criteria are not met.
- **Carcinogenicity:** No evidence of carcinogenicity. Based on the available data, the classification criteria are not met.

AMYLOPECTIN

- **Eye Irritation:** None reported
- **Skin Irritation:** None reported
- **Acute Oral Toxicity:** None reported
- **Acute Inhalation Toxicity:** None reported
- **Sub Chronic:** None available
- **Chronic:** None available
- **Teratology:** None available
- **Reproduction:** None available
- **Germ Cell Mutagenicity:** None available
- **Carcinogenicity:** None available

CALCIUM SULPHATE DIHYDRATE

- **Eye Irritation:** None available
- **Skin Irritation:** None available
- **Acute Oral Toxicity:** None available
- **Acute Inhalation Toxicity:** None available
- **Sub Chronic:** None available
- **Chronic:** None Available
- **Teratology:** None available
- **Reproduction:** None available
- **Germ Cell Mutagenicity:** None available
- **Carcinogenicity:** None available

DISTILLATE MINERAL OIL

- **Eye Irritation:** None reported
- **Skin Irritation:** LD50, Dermal, rabit, >2000 mg/kg, conclusion/summary – not available
- **Acute Oral Toxicity:** LD50, Oral, rat >5000 mg/kg, conclusion/summary – not available
- **Acute Inhalation Toxicity:** LC50 Inhalation dusts/mists, rat, >5280 mg/m^3, conclusion/summary – not available
- **Sub Chronic:** None available
- **Chronic:** None available
- **Teratology:** None available
- **Reproduction:** None available
- **Germ Cell Mutagenicity:** None Available
- **Carcinogenicity:** None available

Symptoms related to the physical, and chemical and toxicological characteristics:

- Products are not intended for ingestion. Small amounts (e.g. a teaspoonful) swallowed accidentally are not likely to cause effects. Symptoms of accidental over-exposure to high doses of inorganic borate salts have been associated with ingestion or absorption through large areas of severely damaged skin. These may include nausea, vomiting, and diarrhea, with delayed effects of skin redness and peeling.

Delayed and immediate effects as well as chronic effects from short and long-term exposure:

- Human epidemiological studies show no increase in pulmonary disease in occupational populations with chronic exposures to boric acid and sodium borate dust. Human epidemiological studies indicate no effect on fertility in occupational populations with chronic exposures to borate dust and indicate no effect to a general population with high exposures to borates in the environment.

Numerical measures of toxicity (such as acute toxicity):

- None. This product is a mixture.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity:

NEWSPRINT (Cellulose Fiber)

- **Ecotoxicity**: Biodegrades slowly in water (half-life range 1 month – 1 year in freshwater and coastal seawater)
- **Persistence and Degradability:** Not available
- **Bioaccumulative Potential:** Not available
- **Mobility in Soil:** Not available
- **Other Adverse Effects (such as hazardous to the ozone layer):** None known

BORIC ACID

- **Ecotoxicity:** Based on the acute data for freshwater species, boric acid is not classified as hazardous to the environment.
- **Persistence and Degradability:** Biodegradation is not an applicable endpoint since boric acid is an inorganic substance.
- **Bioaccumulative Potential:** This product will undergo hydrolysis in water to form undissociated boric acid. Boric acid will not biomagnify through the food chain. Octanol/Water partition coefficient: Log P_{ow} = -0.7570 @ 25°C
- **Mobility in Soil:** Boric acid is soluble in water and is leachable through normal soil. Adsorption to soils or sediments is insignificant.
- **Other Adverse Effects (such as hazardous to the ozone layer):** None known

AMYLOPECTIN

- **Ecotoxicity:** Not available
- **Persistence and Degradability:** Not available
- **Bioaccumulative Potential:** Not available
- **Mobility in Soil:** Not available
- **Other Adverse Effects (such as hazardous to the ozone layer):** None known

DISTILLATE MINERAL OIL

- **Ecotoxicity:** NOEC 0.098 mg/l, fish, 14 days.
- **Persistence and Degradability:** Not available
- **Bioaccumulative potential:** Not available
- **Mobility in Soil:** Not available
- **Other Adverse Effects (such as hazardous to the ozone layer):** None known

CALCIUM SULPHATE DIHYDRATE

- **Ecotoxicity:** 96 Hr LC50 fish, mg/l: >1970 (fathead minnow)
- **Persistence and Degradability:** Calcium sulphate dissolves in water forming calcium and sulfate ions
- **Bioaccumulative Potential:** Not expected
- **Mobility in Soil:** Not available
- **Other Adverse Effects (such as hazardous to the ozone layer):** None known

SECTION 13 – DISPOSAL CONSIDERATIONS

- Dispose as a non-hazardous waste in accordance with all local, state, and federal regulations.

SECTION 14 – TRANSPORT INFORMATION

- May be shipped normally as a non-hazardous material.

SECTION 15 – REGULATORY INFORMATION

- **Superfund**: CERCLA/SARA. This product is not listed under the Comprehensive Environmental Response Compensation and Liability Act(CERCLA) or its 1986 amendments, the Superfund Amendments and Reauthorization Act (SARA), including substances listed under Section 313 of SARA, Toxic Chemicals, 42 USC 11023, 40 CFR 372.65; Section 302 of SARA Extremely Hazardous Substances, 42 USC 11002, 40 CFR 355; or the CERCLA Hazardous Substances list, 42 USC 9604, 40 CFR 302.

- **RCRA:** This product is not listed as a hazardous waste under any sections of the Resource Conservation and Recovery Act or regulations (40 CFR 261 et seq.).

- **Safe Drinking Water Act:** This product is not regulated under the SDWA, 42 USC 300g-1, 40 CFR 141 et seq. Consult state and local regulations for possible water quality advisories regarding boron and ammonia.

- **California Proposition 65:** This product is not listed on any Proposition 65 lists of carcinogens or reproductive toxicants.

- **OSHA Carcinogen:** Not listed

- **Clean Water Act (Federal Water Pollution Control Act):** 33 USC 1251 et seq.: This product is not itself a discharge covered by any water quality criteria of Section 304 of the CWA, 33 USC 1314. This product is not on the Section 307 List of Priority Pollutants, 33 USC 1317, 40 CFR 116. This product is not on the Section 311 List of Hazardous Substances, 33 USC 1321, 40 CFR 116.

- **TSCA No.:** This product does not appear on the EPA TSCA inventory list. Ammonium sulfate and boric acid appear on the EPA TSCA inventory list under the CAS Nos. 7783-20-2 and 10043-35-3 respectively.
- **OSHA/Cal/OSHA:** This SDS document meets the requirements of both OSHA and Cal/OSHA hazard communication standards. Refer to Section 8 for regulatory exposure limits.
- **IARC:** The International Agency for Research on Cancer (of the World Health Organization) does not list or categorize this product as a carcinogen.
- **NTP Annual Report on Carcinogens:** Not listed

SECTION 15: OTHER INFORMATION

INFORMATION PRESENTED HEREIN HAS BEEN COMPILED FROM SOURCES CONSIDERED DEPENDABLE AND IS ACCURATE AND RELIABLE 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 PATENT OR IN VIOLATION OF ANY LAW OR REGULATION. THE USER IS RESPONSIBLE TO DETERMINE THE SUITABILITY OF ANY MATERIAL FOR A SPECIFIC PURPOSE AND ADOPT NECESSARY SAFETY PRECAUTIONS. WE MAKE NO WARRANTY AS TO RESULTS TO BE OBTAINED IN USING ANY MATERIAL AND, SINCE CONDITIONS OR USE ARE NOT UNDER OUR CONTROL, WE MUST NECESSARILY DISCLAIM ALL LIABILITY WITH RESPECT TO USE OF ANY MATERIAL SUPPLIED BY US.

Cellulose insulation using borates have a long track record of being safe when used as directed, but GHS classification criteria are based on potential hazards. These hazards are associated with animals in a laboratory setting being exposed to large amounts of borates in their feed over long periods of time – exposures that are not relevant to people, even those who work with borates every day. Nevertheless, in order to comply with GHS, Greenfiber has self-classified its borate insulation products as reproductive toxicants in the category that represents the lowest hazard.

HMIS Rating		**National Fire Protection Association (NFPA)**	
Health	1	Red (Flammability)	1
Flammability	1	Yellow (Reactivity)	0
Reactivity	0	Blue (Acute Health)	1*
Personal Protection	E	**Chronic Effects*	

ABBREVIATIONS

CAS	Chemical Abstract Services (identifies specific chemical)	**OSHA**	Occupational Safety and Health Administration
mg/m^3	Milligrams per cubic meter	**PNOR**	Particulates Not Otherwise Regulated
LCLo	Lethal concentration low	**PNOS**	Particulates Not Otherwise Specified
LDLo	Lethal dose low	**PEL**	OSHA Permissible Exposure Limit
LC50	Lethal concentration 50%	**ppm**	Parts per million
LD50	Lethal dose 50%	**RfD**	Reference Dose
LOAEL	Lowest Observed Adverse Effect Level	**RTECS**	Registry of Toxic Effects of Chemical Substances
mg/l/H	Milligrams per liter per hour	**TDLo**	Toxic dose low
mg/kg	Milligrams per kilogram	**TLV**	ACGIH Threshold Limit Value
mg/m^3	Milligrams per cubic meter	**TWA**	8 hour Time Weighted Average exposure

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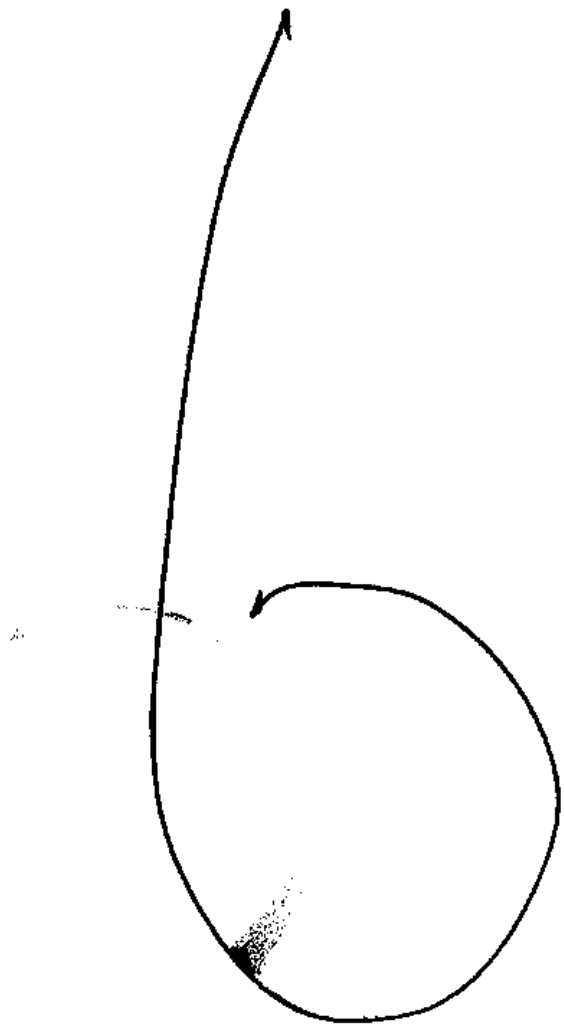
3. Dangerous Properties of Industrial Materials, Sax's, 1997 CD-Folio.
4. Hazardous Substances Data Bank, Canadian Centre for Occupational Health and Safety, Q-1, 1998.
5. Integrated Risk Information System, EPA, online.
6. Toxicological Profiles, Agency for Toxic Substances and Disease Registry, U.S. Public Health Service, 1997.
7. TLVs and other Occupational Exposure Values, American Conference of Governmental Industrial Hygienists, 2010.
8. 29 CFR 1910.1000 TABLE Z-1 and Z-3
9. California OSHA Title 8, Section 5155, Table AC-1
10. OSHA 29 CFR 1910.1200 & related Appendices - 2012



Isocyanate Component A

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

1.1 Product identifier

Trade name	:	Isocyanate Component A
Substance name	:	Isocyanic acid, polymethylenepolyphenylene ester

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

Use of the Substance/Mixture	:	Component of a Polyurethane System.
Uses advised against	:	Professional use of aprotic polar solvents for cleaning., Consumer spray applications., Consumer products requiring heating above 40°C.

1.3 Details of the supplier of the safety data sheet

Company	:	3315 E Division St
Address	:	Arlington, Texas 76017
Telephone	:	817-640-4900
E-mail address of person responsible for the SDS	:	info@huntsmanbuilds.com

1.4 Emergency telephone number

Emergency telephone number	:	In USA, call Chemtrec at (800) 424-9300. In Canada, call Canutec at (613) 966-6666,

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4	H332: Harmful if inhaled.
Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Respiratory sensitisation, Category 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Carcinogenicity, Category 2	H351: Suspected of causing cancer.
Specific target organ toxicity - single exposure, Category 3, Respiratory system	H335: May cause respiratory irritation.
Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through prolonged or repeated exposure.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements :

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary statements : **Prevention:**

P201	Obtain special instructions before use.
P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264	Wash skin thoroughly after handling.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing

protection.

Response:

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.

P308 + P313 IF exposed or concerned: Get medical advice/attention.

Additional Labelling:

EUH204 Contains isocyanates. May produce an allergic reaction.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Substance name : Isocyanic acid, polymethylenepolyphenylene ester

CAS-No. : 9016-87-9

EC-No. : Polymer

Hazardous components

Chemical name	CAS-No. EC-No.	Concentration (% w/w)
Isocyanic acid, polymethylenepolyphenylene ester	9016-87-9 Polymer	>= 90 - <= 100

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Move out of dangerous area.
Do not leave the victim unattended.
Get medical attention immediately if symptoms occur.
Show this safety data sheet to the doctor in attendance.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.
It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
If potential for exposure exists refer to Section 8 for specific personal protective equipment.
First Aid responders should pay attention to self-protection and use the recommended protective clothing

If inhaled	:	If breathed in, move person into fresh air. Call a physician or poison control centre immediately. Keep patient warm and at rest. Keep respiratory tract clear. If breathing is difficult, give oxygen. If breathing is irregular or stopped, administer artificial respiration. If unconscious, place in recovery position and seek medical advice. Consult a physician immediately if symptoms such as shortness of breath or asthma are observed. A hyper-reactive response to even minimal concentrations of diisocyanates may develop in sensitised persons. The exposed person may need to be kept under medical surveillance for 48 hours. LC50 (rat) : ca. 490 mg/m³ (4 hours) : using experimentally produced respirable aerosol having aerodynamic diameter <5microns. Methods used to generate the exposure concentrations in the animal studies use extreme laboratory conditions and does not represent actual exposure conditions of the material in the workplace, storage, transportation or expected use on the market due to the very low vapor pressure. Therefore, these test results cannot be used to for hazard classification of the material. Rather, an acute toxicity estimate is calculated based on weight of evidence and expert judgement and is used to justify a modified classification for acute inhalation toxicity.
In case of skin contact	:	In case of contact, immediately flush skin with soap and plenty of water. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before reuse. Thoroughly clean shoes before reuse. Call a physician if irritation develops or persists. An MDI study has demonstrated that a polyglycol-based skin cleanser (such as D-Tam™, PEG-400) or corn oil may be more effective than soap and water.
In case of eye contact	:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If easy to do, remove contact lens, if worn. Protect unharmed eye. Keep eye wide open while rinsing. Seek medical advice.
If swallowed	:	Gently wipe or rinse the inside of the mouth with water. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Keep respiratory tract clear. Keep at rest. If a person vomits when lying on his back, place him in the recovery position. Never give anything by mouth to an unconscious person.

Take victim immediately to hospital.
If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Severe allergic skin reactions, bronchiospasm and anaphylactic shock

Risks : This product is a respiratory irritant and potential respiratory sensitiser: repeated inhalation of vapour or aerosol at levels above the occupational exposure limit could cause respiratory sensitisation.
Symptoms may include irritation to the eyes, nose, throat and lungs, possibly combined with 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 sensitised persons.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Symptomatic and supportive therapy as needed. Following severe exposure medical follow-up should be monitored for at least 48 hours.

The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Foam
Carbon dioxide (CO2)
Dry powder

Unsuitable extinguishing media : Water may be used if no other available and then in copious quantities. Reaction between water and hot isocyanate may be vigorous.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
The pressure in sealed containers can increase under the influence of heat.
Exposure to decomposition products may be a hazard to health.

Hazardous combustion products : Combustion products may include: carbon monoxide, carbon dioxide, nitrogen oxides, hydrocarbons and HCN. In the event of extreme heat (>500 degrees C), aniline is suspected of

being formed.

No hazardous combustion products are known

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Specific extinguishing methods	:	Cool containers/tanks with water spray.
Further information	:	Standard procedure for chemical fires. Due to reaction with water producing CO2-gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Prevent fire extinguishing water from contaminating surface water or the ground water system. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Immediately evacuate personnel to safe areas. Use personal protective equipment. If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Refer to protective measures listed in sections 7 and 8. Only qualified personnel equipped with suitable protective equipment may intervene. For additional precautions and advice on safe handling, see section 7. Never return spills in original containers for re-use. Make sure that there is a sufficient amount of neutralizing/ absorbent material near the storage area. The danger areas must be delimited and identified using relevant warning and safety signs. Treat recovered material as described in the section "Disposal considerations". For disposal considerations see section 13.

6.2 Environmental precautions

Environmental precautions : Do not allow uncontrolled discharge of product into the environment.
Do not allow material to contaminate ground water system.
Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
Local authorities should be advised if significant spillages cannot be contained.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Clean-up methods - small spillage
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Clean contaminated surface thoroughly.
Sweep up or vacuum up spillage and collect in suitable container for disposal.
Neutralize small spillages with decontaminant.
The compositions of liquid decontaminants are given in Section 16.
Remove and dispose of residues.
Clean-up methods - large spillage
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:
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Leave to react for at least 30 minutes.
Shovel into open-top drums for further decontamination.
Wash the spillage area with water.
Test atmosphere for MDI vapour.
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8., For disposal considerations see section 13., The compositions of liquid decontaminants are given in Section 16.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures : Ensure that eyewash stations and safety showers are close to the workstation location.

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : For personal protection see section 8.
Avoid formation of aerosol.
Do not breathe vapours or spray mist.

Do not breathe vapours/dust.
Do not swallow.
Do not get in eyes or mouth or on skin.
Do not get on skin or clothing.
Avoid exposure - obtain special instructions before use.
Smoking, eating and drinking should be prohibited in the application area.
Provide sufficient air exchange and/or exhaust in work rooms.
Keep container closed when not in use.
Open drum carefully as content may be under pressure.
Dispose of rinse water in accordance with local and national regulations.
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.
Industrial use of aprotic polar solvents for cleaning can release hazardous primary aromatic amines (>0.1%)

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash face, hands and any exposed skin thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labelled containers. Observe label precautions. Protect from moisture. Electrical installations / working materials must comply with the technological safety standards. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage : For incompatible materials please refer to Section 10 of this SDS.

Further information on storage stability : Stable under normal conditions.

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Personal protective equipment

Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
Chemical splash goggles.
Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.
Please follow all applicable local/national requirements when selecting protective measures for a specific workplace.
Ensure that eyewash stations and safety showers are close to the workstation location.

Hand protection
Remarks : 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.

Use chemical resistant gloves classified under Standard EN374: protective gloves against chemicals and microorganisms. Examples of glove materials 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 frequently repeated contact may occur, a glove with protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN374) is recommended.

When only brief contact is expected, a glove with protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN374) is recommended.
Notice: The selection of a specific glove for a particular application and duration of use in a 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 supplier The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. By industrial use of aprotic polar solvents for cleaning : Butyl rubber (0.7mm), Nitrile rubber (0.4mm), Chloroprene (0.5mm)

Skin and body protection : Impervious clothing

		Choose body protection according to the amount and concentration of the dangerous substance at the work place. Recommended: Overall (preferably heavy cotton) or Tyvek-Pro Tech 'C' , Tyvek Pro 'F' disposable coverall.
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. In emergency, non-routine and unknown exposure situations, including confined space entries, a NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA)or a full facepiece pressure demand supplied air respirator (SAR) with auxiliary self-contained air supply, should be used.
Protective measures	:	Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Ensure that eye flushing systems and safety showers are located close to the working place.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	liquid
Colour	:	brown, clear
Odour	:	slight, musty
Odour Threshold	:	No data is available on the product itself.
pH	:	substance/mixture reacts with water
Melting point	:	5 °C Method: Melting / Freezing Temperature
Boiling point	:	No data is available on the product itself.
Flash point	:	230 °C Method: closed cup
Evaporation rate	:	No data is available on the product itself.
Flammability (solid, gas)	:	No data is available on the product itself.
Burning rate	:	No data is available on the product itself.

Upper explosion limit / Upper flammability limit	:	No data is available on the product itself.
Lower explosion limit / Lower flammability limit	:	No data is available on the product itself.
Vapour pressure	:	0,00031 Pa (20 °C) Method: Vapour Pressure
Relative vapour density	:	8,5 Method: see user defined free text
Relative density	:	1,23 (20 °C)
Density	:	1,23 g/cm3 (25 °C)
Solubility(ies)		
Water solubility	:	No data is available on the product itself.
Solubility in other solvents	:	No data is available on the product itself.
Partition coefficient: n-octanol/water	:	No data is available on the product itself.
Auto-ignition temperature	:	No data is available on the product itself.
Decomposition temperature	:	No data is available on the product itself.
Viscosity		
Viscosity, dynamic	:	195 mPa.s (25 °C)
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

9.2 Other information

Self-ignition	:	> 600 °C Method: Auto-Ignition Temperature (Liquids and Gases)

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	Reaction with water (moisture) produces CO2-gas. Exothermic reaction with materials containing active hydrogen groups. The reaction becomes progressively more vigorous and can

be violent at higher temperatures if the miscibility of the reaction partners is good or is supported by stirring or 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.

10.4 Conditions to avoid

Conditions to avoid : Extremes of temperature and direct sunlight.
Exposure to air or moisture over prolonged periods.

10.5 Incompatible materials

Materials to avoid : Acids
Amines
Bases
Metals
water

10.6 Hazardous decomposition products

Combustion products may include: carbon monoxide, carbon dioxide, nitrogen oxides, hydrocarbons and HCN. In the event of extreme heat (>500 degrees C), aniline is suspected of being formed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity - Product : LD50 (Rat, male): > 10 000 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity - Product : Assessment: The substance/mixture is not toxic on inhalation as defined by dangerous goods regulations.
Remarks: Methods used to generate the exposure concentrations in the animal studies use extreme laboratory conditions and does not represent actual exposure conditions of the material in the workplace, storage, transportation or expected use on the market due to the very low vapor pressure. Therefore, these test results cannot be used to for hazard classification of the material. Rather, an acute toxicity estimate is calculated based on weight of evidence and expert judgement and is used to justify a modified classification for acute inhalation toxicity.

LC50 (Rat, male and female): 0,49 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The component/mixture is moderately toxic after short term inhalation.

Acute dermal toxicity - Product	:	LD50 (Rabbit, male and female): > 9 400 mg/kg Method: OECD Test Guideline 402
Acute toxicity (other routes of administration)	:	No data available

Skin corrosion/irritation

Product:

Species: Rabbit
Assessment: Irritating to skin.
Method: OECD Test Guideline 404
Result: Skin irritation

Serious eye damage/eye irritation

Product:

Species: Rabbit
Assessment: Mild eye irritant
Method: OECD Test Guideline 405
Result: Irritation to eyes, reversing within 7 days

Respiratory or skin sensitisation

Product:

Exposure routes: Skin
Species: Guinea pig
Method: OECD Test Guideline 406
Result: May cause sensitisation by skin contact.

Exposure routes: Respiratory Tract
Species: Rat
Result: May cause sensitisation by inhalation.

Assessment:	May cause an allergic skin reaction., May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Germ cell mutagenicity

Product:

Genotoxicity in vitro	:	Concentration: 200 ug/plate Metabolic activation: with and without metabolic activation Method: Directive 67/548/EEC, Annex, B.13/14 Result: negative

Product:

Genotoxicity in vivo	:	Application Route: Inhalation Result: Not classified due to inconclusive data.

Application Route: Inhalation

Exposure time: 3 Weeks
Dose: 113 mg/m3
Method: OECD Test Guideline 474
Result: negative

Product:

Germ cell mutagenicity-Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity

Product:

Remarks: Rats have been exposed for two years to a respirable aerosol of polymeric MDI which resulted in a chronic pulmonary irritation at high concentrations. Only at the top level (6 mg/m3), there was a significant incidence of a benign tumour of the lung (adenoma) and one malignant tumour (adenocarcinoma). There were no lung tumours at 1 mg/m3 and no effects at 0.2 mg/m3. Overall, the tumour incidence, both benign and malignant, and the number of animals with the tumours were not different from controls. The increased incidence of lung tumours 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 tumour formation will occur.

Remarks: Industrial use of aprotic polar solvents for cleaning can release hazardous primary aromatic amines (>0.1%)
Based on animal studies, primary aromatic amines are considered as potential carcinogen to humans. Some of those chemicals are proven carcinogens to humans
Provided the recommended personal protective equipment and hygiene measures are applied, no adverse effects to human health are to be expected

Species: Rat, male and female
Application Route: Inhalation
Exposure time: 24 month(s)
Dose: 1 mg/m³
Frequency of Treatment: 5 daily
Method: OECD Test Guideline 453
Result: positive

Species: Rat, male and female
Application Route: Inhalation
Exposure time: 24 month(s)
Dose: 1 mg/m³
Frequency of Treatment: 5 daily
Method: OECD Test Guideline 453
Result: positive

Components:

Isocyanic acid, polymethylenepolyphenylene ester:
Carcinogenicity - Assessment : Suspected human carcinogens

Reproductive toxicity

Product:

Effects on fertility : Species: Rat, male and female
Application Route: Inhalation
Method: OECD Test Guideline 414
Remarks: No significant adverse effects were reported

Product:

Effects on foetal development : Species: Rat, male and female
Application Route: Inhalation
General Toxicity Maternal: 4 mg/m³
Method: OECD Test Guideline 414
Result: No teratogenic effects

Product:

Reproductive toxicity - Assessment : No toxicity to reproduction
No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

STOT - single exposure

Product:

Exposure routes: Inhalation
Target Organs: Respiratory Tract
Assessment: May cause respiratory irritation.

STOT - repeated exposure

Product:

Exposure routes: Inhalation
Target Organs: Respiratory Tract
Assessment: May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Product:

Species: Rat, male and female
NOEC: 0,2
Exposure time: 17 520 hNumber of exposures: 5 d
Method: OECD Test Guideline 453

Repeated dose toxicity - Assessment : No data available

Aspiration toxicity

No data available

Experience with human exposure

General Information: No data available

Inhalation:	No data available
Skin contact:	No data available
Eye contact:	No data available
Ingestion:	No data available

Toxicology, Metabolism, Distribution
No data available

Neurological effects
No data available

Further information

Ingestion:	No data available

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish	:	LC50 (Brachydanio rerio (zebrafish)): > 1 000 mg/l Exposure time: 96 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 203 LC0 : > 1 000 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 1 000 mg/l Exposure time: 24 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus (green algae)): > 1 640 mg/l Exposure time: 72 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: >= 10 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Test Type: semi-static test Test substance: Fresh water Method: OECD Test Guideline 211
Toxicity to microorganisms	:	EC50 (activated sludge): > 100 mg/l Exposure time: 3 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 209
Toxicity to soil dwelling organisms	:	EC50: > 1 000 mg/kg Exposure time: 336 h Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207

Components:

Isocyanic acid, polymethylenepolyphenylene ester:

Toxicity to fish	:	LC50 (Brachydanio rerio (zebrafish)): > 1 000 mg/l Exposure time: 96 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 203 LC0 : > 1 000 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 1 000 mg/l Exposure time: 24 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus (green algae)): > 1 640 mg/l Exposure time: 72 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 201
Toxicity to microorganisms	:	EC50 (activated sludge): > 100 mg/l Exposure time: 3 h Test Type: static test Test substance: Fresh water Method: OECD Test Guideline 209
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: >= 10 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)

Test Type: semi-static test
Test substance: Fresh water
Method: OECD Test Guideline 211

Toxicity to soil dwelling organisms : EC50: > 1 000 mg/kg
Exposure time: 336 h
Species: Eisenia fetida (earthworms)
Method: OECD Test Guideline 207

12.2 Persistence and degradability

Product:

Biodegradability : Inoculum: Domestic sewage
Concentration: 30 mg/l
Result: Not biodegradable
Biodegradation: 0 %
Exposure time: 28 d
Method: Inherent Biodegradability: Modified MITI Test (II)

Components:

Isocyanic acid, polymethylenepolyphenylene ester:

Biodegradability : Inoculum: Domestic sewage
Concentration: 30 mg/l
Result: Not biodegradable
Biodegradation: 0 %
Exposure time: 28 d
Method: Inherent Biodegradability: Modified MITI Test (II)

Stability in water : Degradation half life (DT50): 0,8 d (25 °C)
Method: No information available.
Remarks: Fresh water

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 200
Remarks: Bioaccumulation is unlikely.

Components:

Isocyanic acid, polymethylenepolyphenylene ester:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 200
Remarks: Bioaccumulation is unlikely.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or

very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

12.6 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	:	Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

SECTION 14: Transport information

IATA
Not regulated as a dangerous good

IMDG
Not regulated as a dangerous good

ADR
Not regulated as a dangerous good

RID
Not regulated as a dangerous good

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered:

Number on list 3
Diphenylmethanediisocyanate, polymeric
(Number on list 56)
4,4'-methylenediphenyl diisocyanate
(Number on list 56)
2,4'-methylenediphenyl diisocyanate
(Number on list 56)

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
Not applicable

Occupational Illnesses (R-461-3, France) : 62

Other regulations:
Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

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

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

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

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

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

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

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

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

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

TSCA : All substances listed as active on the TSCA inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), ENCS (Japan), KECI (Korea), NZIOC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (United States of America (USA))

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.
Product falls under the EU-polymer definition.

SECTION 16: Other information

Further information

Other information	:	Liquid decontaminants (percentages by weight or volume) : Decontaminant 1 : *- sodium carbonate : 5 - 10 % *- liquid detergent : 0.2 - 2 % *- water : to make up to 100 % Decontaminant 2 : *- concentrated ammonia solution : 3 - 8 % *- liquid detergent : 0.2 - 2 % *- water : to make up to 100 % Decontaminant 1 reacts slower with diisocyanates but is more environmentally friendly than decontaminant 2. Decontaminant 2 contains ammonia. Ammonia presents health hazards. (See supplier safety information.)

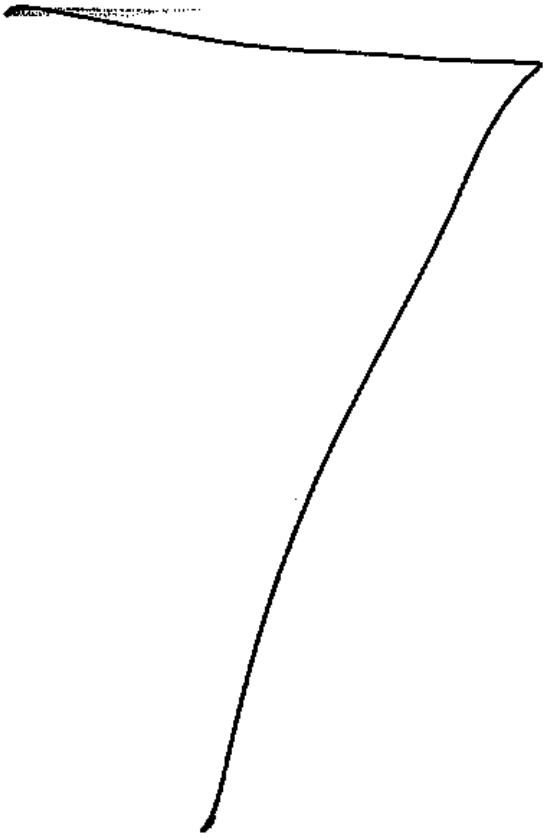
The information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN BUILDING SOLUTIONS EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN BUILDING SOLUTIONS PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE.



FIRE PROTECTIVE COATING

FS-IB™ IGNITION BARRIER

SAFETY DATA SHEET

SECTION 1 PRODUCT & COMPANY INFORMATION

1.1	**Product Identifier**	
	Product Name	FS-IB™ IGNITION BARRIER
	Brand	Flame Seal Products, Inc.
	CAS #	NA / mixture
1.2	**Relevant identified uses of the substance or mixture and uses advised against**	
	Identified uses	Water based fire retardant paint.
1.3	**Details of the Supplier of the Safety Data Sheet**	
	Company	Flame Seal Products, Inc. 15200 West Drive Houston, TX 77053 USA
	Telephone	713-668-4291
	Fax	713-668-1724
1.4	**Emergency telephone number**	
	Emergency #	**800-424-9300**

SECTION 2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Skin irritant, eye irritant

For the full text of the H-statements mentioned in this section, see Section 16.

2.2 GHS Label Elements, including precautionary statements

WARNING

Hazard Statements	
H316 : 3	May causes mild skin irritation.
H320 : 2B	Causes eye irritation.
Precautionary Statements	
P103	Read label before use.
P264	Wash hands thoroughly after handling.
P280	Wear eye/face protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P332 + 313	If skin irritation occurs: get medical advice/attention.
P337 + P313	If eye irritation persists: get medical advice/attention.
P404	Store in a closed container.
P501	Dispose of contents/container using approved waste disposal facility.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

H303	May be harmful if swallowed.

For the full text of the H-statements mentioned in this section, see section 16.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula	Water based latex paint with intumescent additives.		
Hazardous Components		**Classification**	**Concentration**
Acrylamide-ethylene-vinylchloride copolymer	Proprietary – Wacker Co.	eye irritation (2B), mild skin irritation (3)	<3%
Titanium dioxide	CAS # 13463-67-7	See Section 11 for hazards	
Melamine	CAS # 108-78-1	Nuisance and combustible dust in dry form	<20%
Pentaerythritol	CAS # 115-77-5	Nuisance and combustible dust in dry form	<20%

SECTION 4 FIRST AID MEASURES

4.1 Description of first aid measures

General advice	Move out of dangerous area. Consult a Physician. Show this Safety Data Sheet to Physician.
If inhaled	Not expected to be an issue.
In case of skin contact	Wash with soap and plenty of water. If irritation occurs, get medical advice/attention.
In case of eye contact	Flush eyes with plenty of fresh water while holding eyelids open. Remove contact lenses if worn. If eye irritation persists, get medical advice/attention.
If swallowed	Do not induce vomiting. Never give anything by mouth to an unconscious person. Flush mouth with water. If conscious give water to further dilute chemical. Consult physician.

4.2 Most important symptoms and effects, both acute and delayed — The most important known symptoms and effects are described in the labelling (see section 2.2) or in Section 11.

4.3 Indication of any immediate medical attention and special treatment needed — No data available.

SECTION 5 FIRE FIGHTING MEASURES

5.1	**Extinguishing media**	Not combustible (use water spray, fog, foam, dry chemicals, CO_2 or other agents as appropriate for material in surrounding fire).
5.2	**Special hazards arising from substance or mixture**	Heating and/or burning may liberate small amounts of ammonia.
5.3	**Advice for firefighters**	Not combustible (use safety equipment which is suitable for materials in surrounding fire).
5.4	**Further information**	No data available

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1	**Personal precautions, protective equipment and emergency procedures**	Use personal protective equipment. Avoid breathing mist. Ensure adequate ventilation. Evacuate personnel from affected area. For personal protection, see Section 8.
6.2	**Environmental precautions**	Prevent further leakage or spillage, if safe to do so. Keep out of drains.
6.3	**Methods and materials for containment and cleaning up**	Confine spilled material and absorb with sand, sawdust, earth or other available solids. Sweep up and place in a suitable container for disposal.
6.4	**Reference to other sections**	See Section 13 for further disposal info.

SECTION 7 HANDLING & STORAGE

7.1	**Precautions for safe handling**	Wear appropriate protective equipment. Provide adequate ventilation. See Sections 2.2 and 8.
7.2	**Conditions for safe storage, including any incompatibles**	Keep container tightly sealed when not in use. Use good industrial practices to avoid spills. Exposure to strong bases and/or heat may liberate ammonia.
7.3	**Specified end use**	ICC certified Ignition Barrier alternative for tested spray applied polyurethane foam in attics and crawl spaces.

SECTION 8 EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control Parameters

Components:			ACGIH	OSHA
Titanium Dioxide (respirable form)	CAS # 13463-67-7	EC # 236-675-5	10mg/m³ TLV-TWA respirable fraction 1 mg/m³	15 mg/m³ Total dust 8 hr TWA

Engineering Controls	Handle in accordance with good industrial and safety practices. Wash hands after handling.	
Personal Protection Equipment	Respiratory Protection (Specify Type)	For heavy mist exposure, use a NIOSH/MSHA approved respirator suitable for use with organic vapors if proper ventilation cannot be provided.
	Remediation or sanding	Contains titanium dioxide which is considered a potential human carcinogen in respirable form. Do not breath dust. Use measures to control dust to published exposure level limits. Otherwise wear NIOSH suitable respirator for hazardous dust – N100, P100, R100 filters.
	Protective Gloves	Wear impervious gloves as necessary to avoid excessive skin contact (i.e. rubber or neoprene)
	Eye Protection	Protective glasses or goggles in heavy mist areas.
	Other Protective Equipment	Adequate clothing to minimize direct contact with skin.
Ventilation	Local Exhaust	Use exhaust fans if necessary to control mist or vapor.
	Mechanical (general)	Normal room ventilation.
	Special	NA

SECTION 9 PHYSICAL PROPERTIES AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical & Chemical Properties

a)	Appearance	White liquid	k)	Vapor pressure	No data available
b)	Odor	Slight amine	l)	Vapor density	No data available
c)	Odor threshold	NA	m)	Relative density	1.25 – 1.32 g/cm³
d)	pH	7.5 – 8.5	n)	Water solubility	Partially soluble
e)	Melting/freezing point	NA / ~32 °F	o)	Partition coefficient n-octanol/water	No data available
f)	Initial boiling point	~212 °F	p)	Auto ignition temp	None
g)	Flash point	No data available	q)	Decomposition temp	No data available
h)	Evaporation rate	No data available	r)	Viscosity	90 - 130 Ku
i)	Flammability	None	s)	Explosive properties	No data available
j)	Upper/lower flamm limits	No data available	t)	Oxidizing properties	No data available

SECTION 10 STABILITY & REACTIVITY

10.1	**Reactivity**	No data available
10.2	**Chemical Stability**	Stable under recommended storage conditions
10.3	**Possibility of hazardous reactions**	None known
10.4	**Conditions to avoid**	Evaporation – Keep container sealed tightly when not in use
10.5	**Incompatible materials**	Strong bases and alkalis
10.6	**Hazardous decomposition products**	Ammonia, nitrous oxides

SECTION 11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity	LD50 (rat) > 2000 mg/kg Conclusion by analogy.
Inhalation	Not established. Not expected to be harmful. If necessary, use respirator if adequate ventilation is not possible to keep exposure to particulate matter at a minimum in heavy mist areas when spraying.
Dermal	Not established, not expected to be harmful. May be irritating with continual contact.
Skin corrosion/irritation	No data available
Serious eye damage/eye irritation	May cause moderate eye irritation if exposed.
Respiratory or skin sensitization	Prolonged exposure may cause skin reddening.
Germ cell mutagenicity	No data available.
Carcinogenicity	Titanium Dioxide – Respirable form
IARC	Group 2B: Possibly carcinogenic to humans. **(a) Although IARC has classified titanium dioxide as a possible carcinogenic to humans (2B), their summary concludes: "No significant exposure to titanium dioxide is thought to occur during the use of products which titanium dioxide is bound to other materials, such as paints."** **(b) OSHA does not regulate titanium dioxide as a carcinogen.** However, under 29CFR 1910.1200 the SDS must convey the fact that titanium dioxide is a potential carcinogen to rats. See additional information below. **Note: Normal application procedures for this product pose no hazard as to the release of respirable titanium dioxide dust, but grinding or sanding dried films of this product may yield respirable titanium dioxide. Use appropriate protection.**
Reproductive toxicity	No chemicals present in the product are known to cause fertility issues.
Specific organ toxicity (single exposure)	No data available
Specific organ toxicity (repeated exposure)	No data available
Aspiration hazard	No data available.
Additional Information	In lifetime inhalation studies rats were exposed for 2 years to Titanium Dioxide Pigment – Dry Grades at 10, 50 and 250 mg/m³ of respirable TiO_2. Slight lung fibrosis was observed at 50 and 250 mg/m³ levels. Microscopic lung tumors were also observed in 13 percent of the rats exposed to 250 mg/m³, an exposure level that caused lung overloading and impairment of rat lung's clearance mechanisms. In further studies, these tumors were found to occur only under particle overload conditions in a uniquely sensitive species, the rat, and have little or no relevance for humans. The pulmonary inflammatory response to TiO_2 particles exposure was also found to be much more severe in rats than in other rodent species. In February 2006, IARC re-evaluated Titanium dioxide as pertaining to Group 2B: "possibly carcinogenic to humans", based upon inadequate evidence in humans and sufficient evidence in experimental animals for the carcinogenicity of titanium dioxide. IARC evaluation guidelines consider the generation of tumors, in 2 different studies within the same animal species, to be adequate criteria for an assessment of sufficient evidence. The conclusions of several epidemiology studies on more than 20000 TiO_2 industry workers in Europe and the USA did not suggest a carcinogenic effect of TiO_2 dust on the human lung. Mortality from other chronic diseases, including other respiratory diseases was also not associated with exposure to TiO_2 dust. **Based upon all available study results, DuPont scientists conclude that titanium dioxide will not cause lung cancer or chronic respiratory diseases in humans at concentrations experienced in the workplace.**

SECTION 12 ECOLOGICAL INFORMATION

12.1	Toxicity	
	Toxicity to fish	LD50 – Rainbow trout (Oncorhynchus mykiss) > 150 mg/l - 96h LD50 – Fathead minnow (Pimephales promelas) > 150 mg/l - 96h Conclusion by analogy
	Toxicity to daphnia & other aquatic invertebrates	No data available. Conclusions drawn from relevant literature and documentation from similar products.
12.2	Persistence & degradability	Polymer component not readily biodegradable. Elimination by activated sludge. Separation by flocculation is possible.
12.3	Bioaccumulation potential	No adverse effects expected.
12.4	Mobility in soil	No adverse effects expected.
12.5	Results of PBT & vPvP assessment	Not required. Not conducted.
12.6	Other adverse effects	No data available.

SECTION 13 DISPOSAL CONSIDERATIONS

13.1	Waste treatment methods	
	Product	Liquid – Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dried product – Should be disposable as non hazardous solid waste. Check local regulations.
	Contaminated packaging	Empty containers may retain product residue and should be handled accordingly. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use containers.

SECTION 14 TRANSPORT INFORMATION

DOT (US)	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

SECTION 15 REGULATORY INFORMATION

SARA 302 Components	No chemicals in this product are subject to the reporting requirements of SARA Title III, section 302.	
SARA 313 Components	This product does not contain any chemical components with known CAS numbers that exceed the threshold (DeMinimis) reporting levels established by SARA Title III, section 313.	
SARA 311/312	Chronic health hazard.	
New Jersey, Pennsylvania, Massachusetts Right to Know Components	Melamine	CAS # 108-78-1
	Titanium Dioxide	CAS # 13463-67-7
California Prop. 65	WARNING! This product contains a chemical known to the state of California to cause cancer in respirable form. Titanium Dioxide. This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.	
WHMIS	D2A – Carcinogen as respirable dust. Titanium Dioxide.	
IARC	Group 2B – Possible human carcinogen – as respirable dust. Titanium Dioxide.	
RTECS #	XR 2275000 – Titanium Dioxide	
HAPS	No HAPS are present in this product at reportable levels.	
Clean Water Act	Section 311 lists phosphorous as a hazardous substance, which if discharged into or upon water, will present an imminent and substantial danger to public welfare. Spills of >= 5000 pounds (approx. 50,000 pounds of FSTB) must be reported to the National Response Center @ 1-800-424-8802.	

SECTION 16 OTHER INFORMATION

Full text of H-statements referred to under sections 2 and 3

H316 : 3	Cause mild skin irritation.
H320 : 2B	Causes eye irritation.

Hazard pictograms not required per Tables 3.2.5, 3.2.5.1, 3.3.5, 3.3.5.1 of the GHS of Classification and Labeling of Chemicals Fifth Revised Edition.

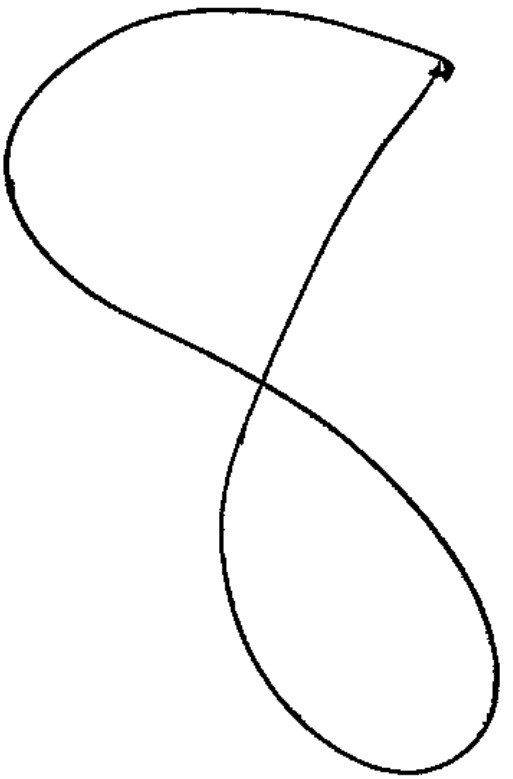
Hazard conclusions drawn from relevant literature and documentation from similar products.

Titanium dioxide included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation(EC) No. 1907/2006(REACH) – Respirable form.

HMIS Rating	Health hazard	1
	Chronic health hazard	*
	Flammability	0
	Physical hazard	0
NFPA	Health hazard	0
	Fire hazard	0
	Reactivity hazard	0

The information in this document is based on the present state of Flame Seal Products' knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantees to the properties of the product. Flame Seal Products shall not be held liable for any damage from handling or from contact with the above product.

Flame Seal Products, Inc. 15200 West Drive, Houston, TX 77053 USA
www.flameseal.com | 713-668-4291 (office) | 713-668-1724 (fax) | **Emergency No. (Chemtrec): 800-424-9300**



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

1.1. Product identifier

Product form : Mixture

Trade name : Foam-Lok FL 2000

Product code : FL 2000 - All Grades

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

Use of the substance/mixture : Closed-cell spray applied foam when installed following application guidelines adheres to framing members and substrates.

Use of the substance/mixture : A component for the production of spray insulation foam

1.3. Details of the supplier of the safety data sheet

Huntsman Building Solutions
3315 E. Division Street,
Arlington, TX 76011
Tel: 817-640-4900 , 888-224-1533
sdsinfo@huntsmanbuilds.com

1.4. Emergency telephone number

Emergency number : CHEMTREC (24 hours) 800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin Irrit. 2 H315
Eye Dam. 1 H318

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :

GHS05

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H315 - Causes skin irritation
H318 - Causes serious eye damage

Precautionary statements (GHS-US) : P264 - Wash hands, face thoroughly after handling
P280 - Wear eye protection, protective gloves, protective clothing
P302+P352 - If on skin: Wash with plenty of water
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a doctor, a POISON CENTER
P321 - Specific treatment (see on this label)
P332+P313 - If skin irritation occurs: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
2-Propanol, 1-chloro-, phosphate (3:1)	(CAS No) 13674-84-5	<20	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312
Oxirane, methyl-, polymer with oxirane, ether with 2,6-bis[[bis(2-hydroxyethyl)amino]methyl]-4-nonylphenol (5:1)	(CAS No) 52019-35-9	<15	Skin Irrit. 2, H315 Eye Dam. 1, H318
Diethylene glycol	(CAS No) 111-46-6	<10	Acute Tox. 4 (Oral), H302
1-Propanol, 2,2-dimethyl-, tribromo derivative	(CAS No) 36483-57-5	<10	Eye Irrit. 2A, H319
1,3-Propanediamine, N,N-bis[3-(dimethylamino)propyl]-N',N'-dimethyl-	(CAS No) 33329-35-0	0.5 - 3	Acute Tox. 4 (Dermal), H312 Skin Corr. 1B, H314 Eye Dam. 1, H318
Ethylene glycol	(CAS No) 107-21-1	0.1 - 0.75	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
Bis(2-dimethylaminoethyl) ether	(CAS No) 3033-62-3	<0.5	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Acute Tox. 4 (Inhalation), H332 Skin Corr. 1B, H314 Eye Dam. 1, H318

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : In all cases of doubt, or when symptoms persist, seek medical attention.

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. In case of breathing difficulties administer oxygen. In case of irregular breathing or respiratory arrest provide artificial respiration. Seek medical advice.

First-aid measures after skin contact : Remove contaminated clothing immediately. Wash skin thoroughly with mild soap and water. Seek medical attention immediately.

First-aid measures after eye contact : Rinse immediately with plenty of water for 15 minutes. Contact lenses should be removed. Immediately get medical attention.

First-aid measures after ingestion : Rinse mouth immediately and drink plenty of water. Call a POISON CENTER or doctor/physician. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in the recovery position and seek medical advice.

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

Symptoms/injuries after inhalation : Inhalation of mist or aerosol may cause irritation to nose and throat . May cause irritation to the respiratory tract.

Symptoms/injuries after skin contact : Causes skin irritation.

Symptoms/injuries after eye contact : Causes serious eye damage.

Symptoms/injuries after ingestion : Can occur: Gastrointestinal disturbance. Tremor. Cardiac disorders. Incoordination, dizziness, headache, nausea, mental confusion slurred speech depending to quantity of ingested material.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry extinguishing powder. Carbon dioxide. Foam.

Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Protective equipment for firefighters : Use self-contained breathing apparatus and chemically protective clothing.

Other information : Prevent entry to sewers and public waters.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Spills of this product present a serious slipping hazard. Avoid breathing mist or vapor . Avoid contact with skin, eyes and clothing.

6.1.1. For non-emergency personnel

Protective equipment : Wear suitable protective clothing. Refer to section 8.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ensure adequate ventilation.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into inert absorbent material. Sweep or shovel spills into appropriate container for disposal. Ensure all national/local regulations are observed.

6.4. Reference to other sections

Refer to sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Obtain special instructions before use. Avoid mixing with air or use for any purpose above atmospheric pressure . Product should not be mixed with air above atmospheric pressure for leak testing or any other purpose. Use dry nitrogen to transfer or leak test equipment pressurized with product.

Hygiene measures : Wash contaminated clothing prior to re-use. Always wash hands and face immediately after handling this product, and once again before leaving the workplace. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Provide local exhaust or general room ventilation. A washing facility/water for eye and skin cleaning purposes should be present.

Storage conditions : Keep out of direct sunlight. Store in original container. Keep container tightly closed in a cool, well-ventilated place. Keep away from heat. Do not freeze. Product that is frozen and/or tending to sedimentation can be liquefied or homogenized by careful application of indirect heat (do not use flames or direct contact with a heat source). Protect from moisture.

Storage temperature : 21 - 26 °C (70 - 80 °F)

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

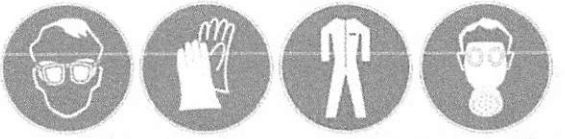
Ethylene glycol (107-21-1)		
USA ACGIH	ACGIH Ceiling (mg/m³)	100 mg/m³

Bis(2-dimethylaminoethyl) ether (3033-62-3)		
USA ACGIH	ACGIH TWA (ppm)	0.05 ppm
USA ACGIH	ACGIH STEL (ppm)	0.15 ppm

8.2. Exposure controls

Appropriate engineering controls : Provide local exhaust or general room ventilation. Ensure adequate ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal protective equipment : Protective goggles. Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection.



Hand protection : Wear suitable gloves resistant to chemical penetration. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Eye protection : Tightly fitting safety goggles. Eye protection, including both chemical splash goggles and face shield, must be worn when possibility exists for eye contact due to spraying liquid or airborne particles.

Skin and body protection : Protective clothing.

Respiratory protection : Full face piece respirator. Approved supplied air respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Dark orange to brown
Odour	: Amine-like
Odour threshold	: No data available
pH	: >= 7
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	: > 200 °C (closed cup)
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.15 - 1.17 g/cm³ @ 25°C (Bulk Density)
Solubility	: Water: Slightly soluble
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 800 - 1000 mPa.s @ 23 °C
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under use and storage conditions as recommended in section 7.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Temperatures above 26 °C / 80°F . Moisture. Freezing. Direct sunlight. Heat.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Carbon oxides (CO, CO2).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Ethylene glycol (107-21-1)	
LD50 oral rat	4000 mg/kg

Ethylene glycol (107-21-1)	
ATE US (oral)	500.00000000 mg/kg bodyweight

Diethylene glycol (111-46-6)	
LD50 oral rat	12565 mg/kg
LD50 dermal rabbit	11890 mg/kg
ATE US (oral)	500.00000000 mg/kg bodyweight

2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)	
LD50 oral rat	930 - 1550 mg/kg
LD50 dermal rabbit	1230 mg/kg
LC50 inhalation rat (mg/l)	> 17.8 mg/l (Exposure time: 1 h)
ATE US (oral)	930.00000000 mg/kg bodyweight
ATE US (dermal)	1230.00000000 mg/kg bodyweight

Bis(2-dimethylaminoethyl) ether (3033-62-3)	
LD50 oral rat	910 mg/kg
LD50 dermal rabbit	238 mg/kg
LC50 inhalation rat (ppm)	117 ppm (Exposure time: 6 h)
ATE US (oral)	910.00000000 mg/kg bodyweight
ATE US (dermal)	238.00000000 mg/kg bodyweight
ATE US (gases)	4500.00000000 ppmv/4h
ATE US (vapours)	11.00000000 mg/l/4h
ATE US (dust,mist)	1.50000000 mg/l/4h

1,3-Propanediamine, N,N-bis[3-(dimethylamino)propyl]-N',N'-dimethyl- (33329-35-0)	
ATE US (dermal)	1100.00000000 mg/kg bodyweight

Skin corrosion/irritation : Causes skin irritation.
pH: >= 7

Serious eye damage/irritation : Causes serious eye damage.
pH: >= 7

Respiratory or skin sensitisation : Not classified
Based on available data, the classification criteria are not met

Germ cell mutagenicity : Not classified
Based on available data, the classification criteria are not met

Carcinogenicity : Not classified
Based on available data, the classification criteria are not met

Reproductive toxicity : Not classified
Based on available data, the classification criteria are not met

Specific target organ toxicity (single exposure) : Not classified
Based on available data, the classification criteria are not met

Specific target organ toxicity (repeated exposure) : Not classified
Based on available data, the classification criteria are not met

Aspiration hazard : Not classified
Based on available data, the classification criteria are not met

Symptoms/injuries after inhalation : Inhalation of mist or aerosol may cause irritation to nose and throat . May cause irritation to the respiratory tract.

Symptoms/injuries after skin contact : Causes skin irritation.

Symptoms/injuries after eye contact : Causes serious eye damage.

Symptoms/injuries after ingestion : Can occur: Gastrointestinal disturbance. Tremor. Cardiac disorders. Incoordination, dizziness, headache, nausea, mental confusion slurred speech depending to quantity of ingested material.

SECTION 12: Ecological information

12.1. Toxicity

Ethylene glycol (107-21-1)	
LC50 fishes 1	41000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)

Ethylene glycol (107-21-1)	
EC50 Daphnia 1	46300 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	14 - 18 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])

Diethylene glycol (111-46-6)	
LC50 fishes 1	75200 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	84000 mg/l (Exposure time: 48 h - Species: Daphnia magna)

2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)	
LC50 fishes 1	56.2 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 1	63 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 other aquatic organisms 1	45 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus)
LC50 fish 2	180 mg/l (Exposure time: 96 h - Species: Leuciscus idus [static])
EC50 other aquatic organisms 2	4 mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Ethylene glycol (107-21-1)	
Log Pow	-1.93

Diethylene glycol (111-46-6)	
BCF fish 1	100 - 180
Log Pow	-1.98 (at 25 °C)

2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)	
BCF fish 1	1.9 - 4.6
Log Pow	2.59

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on ozone layer : No additional information available

Effect on the global warming : No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Product wastes can often be incinerated in approved facilities. Consult the appropriate authorities about waste disposal.

Additional information : Do not re-use empty containers. Do not dispose of waste into sewer. Do not cut, grind, drill, weld, reuse or dispose off containers unless adequate precautions are taken against these hazards. Container Disposal: Steel drums must be emptied and can be sent to a licensed drum reconditioner for reuse, a scrap metal dealer or an approved landfill. Refer to 40 CFR § 261.7 (residues of hazardous waste in empty containers). Decontaminate containers prior to disposal. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers. Ensure all national/local regulations are observed.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT

Not regulated for transport

Additional information

Other information : No supplementary information available.

ADR

Transport document description : No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Ethylene glycol (107-21-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on United States SARA Section 313	
EPA TSCA Regulatory Flag	Y2 - Y2 - indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.
RQ (Reportable quantity, section 304 of EPA's List of Lists) :	5000 lb
SARA Section 313 - Emission Reporting	1.0 %

Diethylene glycol (111-46-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
EPA TSCA Regulatory Flag	Y2 - Y2 - indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

15.2. International regulations

CANADA

Ethylene glycol (107-21-1)	
Listed on the Canadian DSL (Domestic Sustances List)	
WHMIS Classification	Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

Diethylene glycol (111-46-6)	
Listed on the Canadian DSL (Domestic Sustances List)	
WHMIS Classification	Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects

EU-Regulations

Ethylene glycol (107-21-1)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Classification according to Regulation (EC) No. 1272/2008 [CLP]

No additional information available

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

No additional information available

15.2.2. National regulations

Ethylene glycol (107-21-1)
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on the Canadian IDL (Ingredient Disclosure List)

15.3. US State regulations

SECTION 16: Other information

Indication of changes : according to the federal final rule of hazard communication revised on 2012 (HazCom 2012).
3. Composition/information on ingredients. 2.1. Classification of the substance or mixture.

Sources of Key data : Data sources: SDS - Safety Data Sheet.

Abbreviations and acronyms : CAS - Chemical Abstracts Service. CSR - Chemical Safety Report. EC - European Community. EEC - European Economic Community. MSDS - Material Safety Data Sheet. PBT - Persistent, Bioaccumulative and Toxic substance. SDS - Safety Data Sheet . STEL- Short-Term Exposure Limit . TLV- Threshold Limit Value. TWA- Time Weighted Average. vPvB - Very Persistent and Very Bioaccumulative.

Full text of H-phrases: see section 16:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Skin Corr. 1B	Skin corrosion/irritation Category 1B
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H302	Harmful if swallowed
H311	Toxic in contact with skin
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H332	Harmful if inhaled
H373	May cause damage to organs through prolonged or repeated exposure

HMIS III Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability : 1 Slight Hazard

Physical : 1 Slight Hazard

SDS US (GHS HazCom 2012)