Issue date 09/16/2024 Version 1 Revised on 09/16/2024

1. Identification

Product Identifier
Product Name 1320 Rigid Urethane Foam - **Resin**

Other means of identification
SDS # 1310 Rigid Urethane Foam - **Resin**

Recommended use of the chemical and restrictions on use
Recommended Use Expandable Foam.

Details of the supplier of the safety data sheet
Supplier Address

Seymour of Sycamore
917 Crosby Avenue
Sycamore, IL 60178 USA

Seymour of Sycamore
3041 Dougall Avenue, Suite 503
Windsor, ONT N9E 1S3 CANADA

Emergency Telephone Number
Company Phone Number 815-895-9101 | 800-435-4482 (Canada)
Emergency Telephone (24 hr) 1-800-255-3924

2. Hazards Identification

Appearance Light yellow to brown viscous liquid

Physical State Viscous liquid

Odor Pungent

Classification

Acute toxicity - Inhalation (Vapors)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2

Signal Word
Danger

Hazard Statements
Harmful if inhaled
Causes skin irritation
Causes serious eye irritation
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause an allergic skin reaction
May cause respiratory irritation
May cause damage to organs through prolonged or repeated exposure

(Contd. on page 2)

Precautionary Statements - Prevention

Use only outdoors or in a well-ventilated area. Wash face, hands and any exposed skin thoroughly after handling Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace. Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

Get medical advice/attention if you feel unwell
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Get medical attention
IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse
If skin irritation or rash occurs: Get medical advice/attention
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician

Precautionary Statements - Storage

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

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other Hazards

Toxic to aquatic life with long lasting effects

3. Composition/Information On Ingredients

Chemical Name	CAS No	Weight-%
Diphenylmethane, Diissocynate, isomers, and homologues	9016-87-9	50-60
4,4'Diphenylmethane Diisocyanate (MDI)	101-68-8	30-35
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	6846-50-0	10-15
Methylenediphenyl diisocyanate	26447-40-5	1-10

4. First-Aid Measures

First Aid Measures

General Advice

Provide this SDS to medical personnel for treatment.

Eye Contact

Flush eyes with plenty of water for at least 15 minutes Materials containing MDI may react with the moisture of the eye forming a thick material which may be difficult to wash from the eyes. Seek medical attention.

Skin Contact

Wash off in flowing warm water or shower with soap. Remove and wash contaminated clothing and discard contaminated shoes. If redness, itching or a burning sensation develops or persists after the area is washed, consult a physician.

Inhalation

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

Ingestion

If swallowed, drink 1 or 2 glasses of water or milk. Do not induce vomiting unless directed to do so by medicalpersonnel. Never give anything by mouth to an unconscious person. Seek medical attention.

(Contd. on page 3)

Most important symptoms and effects

Symptoms

Coughing, dryness of throat, headache, nausea, difficult breathing and a feeling of tightness in the chest. Skin contact may result in allergic skin reactions or respiratory sensitization.
Watering or discomfort of the eyes. Irritation and corrosive burns to mouth, throat, and stomach. 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

EYES: Stain for evidence of corneal injury. If cornea is burned, instill antibiotic steroid preparation frequently. Workplace vapors have produced reversible corneal epithelial edema impairing vision.

SKIN: This compound is a known skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burns. If burned, treat as a thermal burn.

INGESTION: Treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of theirritating nature of this compound.

INHALATION: Isocyanates are known pulmonary sensitizers. Treatment is essentially symptomatic. An individual having a skin or pulmonary sensitization reaction to this material should be removed from exposure to any isocyanate compound.

5. Fire-Fighting Measures

Suitable Extinguishing Media

Use dry chemical, foam, carbon dioxide or halogenated agents. If water is used, use very large quantities. The reaction between water and hot isocyanate may be vigorous. If possible, contain fire run-off water.

Unsuitable Extinguishing Media

Not determined.

Specific Hazards Arising from the Chemical

Toxic fumes may be given off when material is exposed to fire.

Hazardous Combustion Products

Toxic gases may be formed by fire. Isocyanate vapor and mist, carbon dioxide, carbon monoxide, nitrogen oxides and traces of hydrogen cyanide.

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. At temperatures greater than 400°F, polymeric MDI can polymerize and decompose, which will cause pressure build-up in closed containers. Explosive rupture is possible. Water contamination will produce carbon dioxide. Do not resealcontaminated containers as pressure build-up may rupture the containers. Downwind personnel must be evacuated.

(Contd. on page 4)

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal Precautions

Evacuate unnecessary personnel. Ensure adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet.

Methods and material for containment and cleaning up

Methods for Containment

Prevent further leakage or spillage if safe to do so. Contain and absorb spill immediately. Absorb with appropriate inert material such as sand, clay, etc.

Methods for Clean-Up

Sweep up absorbed material and shovel into suitable containers for disposal. Discard any product, residue, disposable container or liner in full compliance with federal, state, and local regulations. For waste disposal, see section 13 of the SDS.

Clean Up: The area should then be flushed with a decontamination solution. The decontamination solution is a 5-10% mixture of sodium carbonate and 0.5% liquid detergent in water solution or a 3-8% concentrated ammonium hydroxide and 0.5% liquid detergent in water. Use 10 parts decontamination solution to 1 part spilled material. If the ammonium hydroxide solution is used, ammonia will be evolved as a vapor. Use caution to avoid exposure to high concentrations of ammonia. Allow to stand for 48 hours letting evolved carbon dioxide to escape.

7. Handling And Storage

Precautions for safe handling

Advice on Safe Handling

Use personal protection recommended in Section 8. Use only with adequate ventilation. Wash face, hands, and any exposed skin thoroughly after handling. In case of inadequate ventilation wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace. Do not breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

Storage Conditions

When stored between 15° and 30°C (60°and 85°F) in sealed containers, typical shelf life is 6 months or more from the date of manufacture. Consult technical data sheet for shelf life requirements affecting performance quality. Should freezing occur, the material must be thawed thoroughly and mixed until uniform. Opened containers must be handled properly to prevent moisture pickup. Store locked up.

Incompatible Materials

None known based on information supplied.

8. Exposure Controls/Personal Protection

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
4,4'Diphenylmethane Diisocyanate (MDI) 101-68-8	TWA: 0.005 ppm	(vacated) Ceiling: 0.02 ppm regulated under Methylene bisphenyl isocyanate (vacated) Ceiling: 0.2 mg/m3 regulated under Methylene bisphenyl isocyanate Ceiling: 0.02 ppm - Ceiling: 0.2 mg/m3	IDLH: 75 mg/m3 Ceiling: 0.020 ppm 10 min Ceiling: 0.2 mg/m3 10 min TWA: 0.005 ppm TWA: 0.05 mg/m3
Methylenediphenyl diisocyanate 26447-40-5		Ceiling: 0.02 ppm - Ceiling: 0.2 mg/m3 10-15	

(Contd. on page 5)

Appropriate engineering controls

Engineering Controls

Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the SDS. MDI has a very low vapor pressure at room temperature. General/local ventilation typically control exposure levels very adequate. Uses requiring heating and/or spraying may require more aggressive engineering controls or personal proactive equipment. Monitoring is required to determine engineering controls. An eyewash station shower or other drenching facilities is recommended in the work area.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Chemical splash goggles or safety glasses or full face mask must be used consistent with splash hazard present. If vapor exposure causes eye discomfort, use a full face-piece respirator or supplied air hood.

Skin and Body Protection

Wear clothing and gloves impervious to MDI under conditions of use. Materials may include butyl rubber, nitrile rubber, neoprene and Saranax¨ coated Tyvek¨.

Respiratory Protection

A supplied air, full face mask, positive pressure or continuous flow respirator or a supplied air hood is required when airborne concentrations are unknown or exceed threshold values. A positive pressure self contained breathing apparatus can be used in emergencies or other unusual situations. All equipment must be NIOSH/MSHA approved and maintained. Air purifying (cartridge type) respirators are not approved for protection against isocyanates.

General Hygiene Considerations

Avoid contact with skin, eyes and clothing. After handling this product, wash hands before eating, drinking, or smoking. If contact occurs, remove contaminated clothing. If needed, take first aid action shown on section 4 of this SDS. Launder contaminated clothing before reuse.

9. Physical And Chemical Properties

Information on basic physical and chemical properties

Physical State : Viscous liquid

Appearance: Light yellow to brown viscous liquid

Color: Light yellow to brown

Odor: Pungent

Odor Threshold: Not determined

Property	Values	Remarks • Method
pH	Not determined	
Melting Point/Freezing Point	Not determined	
Boiling Point/Boiling Range	> 204.44 °C / > 400 °F	
Flash Point	> 127.22 / > 261 °F	COC
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Not determined	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not determined	
Vapor Density	Not determined	
Specific Gravity	> 1.0	@ 25 °C (77 °F)
Water Solubility	Not soluble	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	145-155 cps	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

(Contd. on page 6)

10. Stability And Reactivity

Reactivity Not reactive under normal conditions; Product will react with water.

Chemical Stability Stable under recommended storage conditions. Polyisocyanates are highly reactive chemicals.

Possibility of Hazardous Reactions None under normal processing.

Conditions to Avoid Keep out of reach of children.

Incompatible Materials None known based on information supplied.

Hazardous Decomposition Products None known based on information supplied.

11. Toxicological Information

Information on likely routes of exposure

Product Information

Eye Contact Causes serious eye irritation.

Skin Contact Causes skin irritation. May cause an allergic skin reaction.

Inhalation Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation.

Ingestion Can burn mouth, throat, and stomach.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Diphenylmethane, Diissocynate, isomers, and homologues 9016-87-9	= 49 g/kg (Rat)	> 9400 mg/kg (Rabbit)	= 490 mg/m3 (Rat) 4 h
4,4'Diphenylmethane Diisocyanate (MDI) 101-68-8	= 9200 mg/kg (Rat)		
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate 6846-50-0	> 3200 mg/kg (Rat)		
Methylenediphenyl diisocyanate 26447-40-5	> 7400 mg/kg (Rat)	> 6200 mg/kg (Rabbit)	= 0.369 mg/L (Rat) 4 h

(Contd. on page 7)

Information on physical, chemical and toxicological effects

Symptoms

INHALATION: At room temperature, MDI vapors are minimal due to low vapor pressure. However, heating, spraying, foaming or otherwise mechanically dispersing (drumming, venting or pumping) operations may generate vaporor aerosol concentrations sufficient to cause irritation or other adverse effects. Excessive exposure may cause irritation of the eyes, upper respiratory tract and lungs. Severe overexposure may lead to pulmonary edema. May cause respiratorysensitization with asthma-like symptoms in susceptible individuals. MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized. Symptoms may include coughing, dryness of throat, headache, nausea, difficult breathing and a feeling of tightness in the chest. Effects may be delayed. Impaired lung function (decreased ventilator capacity) has been associated with overexposure to isocyanates. Persons with known respiratory or allergy problems must not be exposed to this product.

Skin Contact: No irritation is likely to develop following short contact periods with skin. Prolonged or repeated exposure can cause skin irritation, reddening,dermatitis, and in some individuals, sensitization. Skin contact may result in allergic skin reactions or respiratory sensitization, but it is not expected to result in absorption amounts sufficient to cause other adverse effects. May stain skin.

Eye Contact: As a liquid or dust, may cause irritation, inflammation and/or damage to sensitive eye tissue. Symptoms include watering or discomfort of the eyes. Corneal injury is unlikely.

Single dose oral toxicity is considered to be extremely low. Can result in irritation and corrosive action in the mouth, stomach tissue and digestive tract.

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

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen. However, the product as a whole has not been tested.

Chemical Name	ACGIH	IARC	NTP	OSHA
Diphenylmethane, Diissocynate, isomers, and homologues 9016-87-9		Group 3		
4,4'Diphenylmethane Diisocyanate (MDI) 101-68-8		Group 3		
Methylenediphenyl diisocyanate 26447-40-5		Group 3		

IARC (International Agency for Research on Cancer)
Group 3 IARC components are “not classifiable as human carcinogens”

STOT - single exposure

May cause respiratory irritation.

STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Chronic toxicity

As a result of repeated overexposures or a single large dose, certain individuals develop isocyanate sensitization (chemical asthma) or tissue injury in the upper respiratory tract. Animal tests indicate skin contact alone may also lead to allergic respiratory reaction. These effects may be permanent. Any person developing asthmatic reaction or other sensitization should be removed from further exposure.

Numerical measures of toxicity

Not determined

Ecotoxicity

Toxic to aquatic life with long lasting effects.

(Contd. on page 8)

12. Ecological Information

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
2,2,4-Trimethyl-1,3- pentanediol diisobutyrate 6846-50-0		1.55: 96 h Pimephales promelas mg/L LC50 static		1.46: 48 h Daphnia magna mg/L EC50
Methylenediphenyl diisocyanate 26447-40-5	3230: 96 h Skeletonema costatum mg/L EC50			1000: 24 h Daphnia magna mg/L EC50

Persistence/Degradability Not determined.

Bioaccumulation Not determined.

Mobility

Chemical Name	Partition Coefficient
Methylenediphenyl diisocyanate - 26447-40-5	4.5

Other Adverse Effects Not determined.

13. Disposal Considerations

Waste Treatment Methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Drums/containers must be thoroughly drained to process or storage vessels before removal to an appropriate area for subsequent decontamination. Drums/ containers must be decontaminated in properly ventilated areas by personnel protected from the inhalation of isocyanate vapors. Spray or pour 1 to 5 gallons of decontaminating solution into a drum, making sure the walls are well rinsed. Let the drum/container soak unsealed for 48 hours. Pour out the decontaminating solution and triple rinse the empty container. Puncture or otherwise destroy the rinsed containerbefore disposal. DO NOT heat or cut empty containers with electric or gas torch.

14. Transport Information

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT Not regulated

IATA Not regulated

IMDG
Marine Pollutant This material may meet the definition of a marine pollutant

(Contd. on page 9)

15. Regulatory Information

International Inventories Not determined

Legend:

- **TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- **DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- **EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- **ENCS** - Japan Existing and New Chemical Substances
- **IECSC** - China Inventory of Existing Chemical Substances
- **KECL** - Korean Existing and Evaluated Chemical Substances
- **PICCS** - Philippines Inventory of Chemicals and Chemical Substances

US Federal Regulations

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
4,4'Diphenylmethane Diisocyanate (MDI) - 101-68-8	5000 lb		RQ 5000 lb final RQ / RQ 2270 kg final RQ

SARA 313

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Diphenylmethane, Diissocynate, isomers, and homologues - 9016-87-9	9016-87-9	50-60	1.0
4,4'Diphenylmethane Diisocyanate (MDI) - 101-68-8	101-68-8	30-35	1.0
Methylenediphenyl diisocyanate - 26447-40-5	26447-40-5	1-10	1.0

US State Regulations

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Diphenylmethane, Diissocynate, isomers, and homologues - 9016-87-9	X		
4,4'Diphenylmethane Diisocyanate (MDI) - 101-68-8	X		X
Methylenediphenyl diisocyanate - 26447-40-5	X	X	

16. Other Information

NFPA	**Health Hazards** 2	**Flammability** 1	**Instability** 1	**Special Hazards** Not determined
HMIS	**Health Hazards**	**Flammability**	**Physical Hazards** 1	**Personal Protection** Not determined

Issue Date: 09/16/2024

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

(Contd. on page 10)

1. Identification

Product Identifier
Product Name 1320 Rigid Urethane Foam - **Hardener**

Other means of identification
SDS # 1320 Rigid Urethane Foam - **Hardener**

Recommended use of the chemical and restrictions on use
Recommended Use Expandable Foam.

Details of the supplier of the safety data sheet
Supplier Address

Seymour of Sycamore
917 Crosby Avenue
Sycamore, IL 60178 USA

Seymour of Sycamore
3041 Dougall Avenue, Suite 503
Windsor, ONT N9E 1S3 CANADA

Emergency Telephone Number
Company Phone Number 815-895-9101 | 800-435-4482 (Canada)
Emergency Telephone (24 hr) 1-800-255-3924

2. Hazards Identification

Appearance: Amber liquid **Physical State:** Liquid **Odor:** Amine

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-%
Polyether Polyol	PROPRIETARY	90-95
2-(Dimethylamino) ethanol	108-01-0	1-5
Triethylenediamine	280-57-9	1-3

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.

(Contd. on page 11)

4. First-Aid Measures

First Aid Measures

General Advice Provide this SDS to medical personnel for treatment.

Eye Contact Flush eyes with plenty of water for at least 15 minutes. Use fingers to assure that the eyelids are separated and that the eye is being irrigated. Consult a physician.

Skin Contact Remove all contaminated clothing and shoes. Wash skin with large quantities of water and soap. Wash clothing before wearing again and clean shoes. If redness, itching or a burning sensation develops or persists after the area is washed, consult a physician.

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

Ingestion If swallowed, do not induce vomiting unless directed to do so by medical personnel. Give large quantities of water for dilution. Never give anything by mouth to an unconscious person. Seek medical attention.

Most important symptoms and effects

Symptoms Can produce severe respiratory tract irritation. This will be experienced as a discomfort in the nose, throat and chest, with nasal discharge, cough, headache and difficulty with breathing. Prolonged contact may lead to burning associated with severe reddening, swelling and possible tissue destruction. Watering or discomfort of the eyes with marked excess redness and swelling. Nausea, vomiting, diarrhea, dizziness, thirst. 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 Eyes: Exposure to tertiary amine vapors in this product may cause minor transient edema of the corneal epithelium known as “blue haze”. SKIN: Thoroughly cleansing of the entire contaminated area of the body including the scalp and nails is extremely important.

INGESTION: Treat symptomatically. Inducing vomiting is contraindicated because of the irritating nature of this product. INHALATION: Tertiary amines produce severe respiratory tract irritation. This will be experienced as a discomfort in the nose, throat and chest, with nasal discharge, cough and difficulty with breathing.

5. Fire-Fighting Measures

Suitable Extinguishing Media Use dry chemical, foam, carbon dioxide or halogenated agents or water. Use cold water spray to cool fire-exposed containers to minimize risk of rupture. A solid stream of water directed into the hot burning liquid could cause frothing. If possible, contain fire run-off water.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical Toxic fumes may be given off when material is exposed to fire.

Hazardous Combustion Products Toxic fumes may be released. Combustion may produce carbon dioxide, carbon monoxide, nitrogen oxides and silicon oxides.

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.

(Contd. on page 12)

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal Precautions Wear protective clothing as described in Section 8 of this safety data sheet. Isolate and confine spill area. Remove all sources of flames, heating elements, gas engines, etc.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so. Cover spill with inert, non-combustible absorbent material.

Methods for Clean-Up Sweep up absorbed material and shovel into suitable containers for disposal. Discard any product, residue, disposable container or liner in full compliance with federal, state, and local regulations. For waste disposal, see section 13 of the SDS.

7. Handling And Storage

Precautions for safe handling

Advice on Safe Handling Avoid skin and eye contact. Use personal protective equipment when transferring material to or from drums, totes or other containers. Safety glasses and gloves are the minimum protection. Additional precautions must be used when splash hazards are present. Consult the INTER-FOAM 5 Polyisocyanates Handling and Safety information when this “B” blend is used in conjunction with the isocyanate “A” blend. If contamination with isocyanates is suspected, do not reseal containers. Do not smoke or use naked lights, open flames, space heaters or other ignition sources near pouring, frothing or spraying operations.

Conditions for safe storage, including any incompatibilities

Storage Conditions When stored between 15° and 30°C (60°and 85°F) in sealed containers, typical shelf life is 6 months or more from the date of manufacture. Consult technical data sheet for shelf life requirements affecting performance quality. Should freezing occur, the material must be thawed thoroughly and mixed until uniform. Opened containers must be handled properly to prevent moisture pickup.

Incompatible Materials Strong oxidizing agents. Acids.

8. Exposure Controls/Personal Protection

Exposure Guidelines

Appropriate engineering controls

Engineering Controls Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the SDS. Local exhaust ventilation is recommended when working with this product. Uses requiring heating and/or spraying may require more ventilation or personal protective equipment. An eyewash station and safety shower or other drenching facilities are recommended in the work area.

(Contd. on page 13)

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Chemical splash goggles or safety glasses or full face mask must be used consistent with splash hazard present. If vapor exposure causes eye discomfort, use a full face-piece respirator or supplied air hood.

Skin and Body Protection

Wear clothing, boots and gloves resistant to permeation of product. Materials may include butyl rubber, nitrile rubber, neoprene and Saranax¨ coated Tyvek¨.

Respiratory Protection

The specific respirator selected must be based on contamination levels of this blend found in the workplace and must not exceed the working limits of the respirator and be jointly approved by NIOSH and MSHA. Air purifying respirators equipped with full-faced organic vapor cartridge can be used only if isocyanate vapors are not present from the ÔAÓ component. In areas of high concentrations, fresh air-line respirators or self-contained breathing apparatus can be used in emergencies or other unusual situations.

General Hygiene Considerations

Avoid contact with skin, eyes and clothing. After handling this product, wash hands before eating, drinking, or smoking. If contact occurs, remove contaminated clothing. If needed, take first aid action shown on section 4 of this SDS. Launder contaminated clothing before reuse.

9. Physical And Chemical Properties

Information on basic physical and chemical properties

Physical State: Liquid

Appearance: Amber liquid

Color: Amber

Odor: Amine

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	> 110 °C / > 230 °F	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Not determined	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not determined	
Vapor Density	Not determined	
Specific Gravity	> 1.0	@ 25 °C (77 °F)
Water Solubility	Slightly Soluble	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	1,050-1,060 cps	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

(Contd. on page 14)

10. Stability And Reactivity

Reactivity Not reactive under normal conditions.

Chemical Stability This is a stable material. Avoid high temperatures, sparks, flame and extended exposure over 110°F (45°C).

Possibility of Hazardous Reactions None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid Incompatible Materials.

Incompatible Materials Strong oxidizing agents. Acids.

Hazardous Decomposition Products None known based on information supplied.

11. Toxicological Information

Information on likely routes of exposure

Product Information

Eye Contact Eyes may have symptoms of redness, itching, irritation, and watering from overexposure.

Skin Contact Prolonged contact may cause redness and irritation.

Inhalation May cause irritation if inhaled.

Ingestion May cause discomfort if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
2-(Dimethylamino) ethanol 108-01-0	= 1803 mg/kg (Rat)	= 1370 µL/kg (Rabbit)	= 6.1 mg/L (Rat) 4 h = 1641 ppm (Rat) 4 h
Triethylenediamine 280-57-9	= 1700 mg/kg (Rat)		

Information on physical, chemical and toxicological effects

Symptoms

Inhalation: Heating, spraying, foaming or otherwise mechanically dispersing (drumming, venting or pumping) operations of this blend may generate more vapor or aerosol concentrations of it's components. Tertiary amines can produce severe respiratory tract irritation. This will be experienced as a discomfort in the nose, throat and chest, with nasal discharge, cough, headache and difficulty with breathing.

Skin Contact: Prolonged contact may lead to burning associated with severe reddening, swelling and possible tissue destruction.

Eye Contact: Will cause irritation on contact. Symptoms from tertiary amine exposure include watering or discomfort of the eyes with marked excess redness and swelling. Severe exposure could produce chemical burns of the cornea. Tertiary amines have also been known to produce a transient blurring of vision against a general bluish haze and the appearance of halos around bright objects (referred to as "blue haze").

Ingestion: Tertiary amines can cause severe irritation and possible chemical burns of the mouth, throat, esophagus and stomach with pain or discomfort in the mouth, throat, chest and abdomen. Symptoms include; nausea, vomiting, diarrhea, dizziness, thirst, circulatory collapse and coma.

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

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity Not determined

(Contd. on page 15)

12. Ecological Information

Ecotoxicity
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
2-(Dimethylamino) ethanol 108-01-0	35: 72 h Desmodesmus subspicatus mg/L EC50	81: 96 h Pimephales promelas mg/L LC50 static		98.77: 48 h Daphnia magna mg/L EC50
Triethylenediamine 280-57-9		1510 - 1980: 96 h Pimephales promelas mg/L LC50 flow-through		

Persistence/Degradability Not determined.

Bioaccumulation Not determined.

Mobility Not determined.

Chemical Name	Partition Coefficient
2-(Dimethylamino) ethanol 108-01-0	-0.55

Other Adverse Effects Not determined.

13. Disposal Considerations

Waste Treatment Methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Empty containers retain product residue (liquid and/or vapor) and can be dangerous. Do not pressurize or expose such containers to heat, flame, sparks, static electricity or other sources of ignition. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

14. Transport Information

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT Not regulated

IATA Not regulated

IMDG Not regulated

(Contd. on page 16)

15. Regulatory Information

International Inventories

TSCA Listed

Legend:

- **TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- **DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- **EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- **ENCS** - Japan Existing and New Chemical Substances
- **IECSC** - China Inventory of Existing Chemical Substances
- **KECL** - Korean Existing and Evaluated Chemical Substances
- **PICCS** - Philippines Inventory of Chemicals and Chemical Substances

US Federal Regulations

SARA 311/312 Hazard Categories **Acute Health Hazard** - Yes

SARA 313 Not determined

US State Regulations

U.S. State Right-to-Know Regulations Not determined

Chemical Name	New Jersey	Massachusetts	Pennsylvania
2-(Dimethylamino) ethanol - 108-01-0	X	X	X

16. Other Information

NFPA	**Health Hazards** 2	**Flammability** 1	**Instability** 0	**Special Hazards** Not determined
HMIS	**Health Hazards** 2	**Flammability** 1	**Physical Hazards** 0	**Personal Protection** Not determined

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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet