

SAFETY DATA SHEET

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

Product ID: IA-68100 A
Product Name: Quick Foam Fine Urethane (Side A)
Revision Date: May 01, 2015 **Date Printed:** Feb 09, 2017
Version: 1.0 **Supersedes Date:** N.A.
Manufacturer's Name: Mar-flex Waterproofing & Building Products
Address: 500 Business Parkway Carlisle, OH, US, 45005
Emergency Phone: Chem-Trec: 1-800-424-9300
Information Phone Number: 513-422-7285
Fax: 513-422-7282
Product/Recommended Uses:

SECTION 2) HAZARDS IDENTIFICATION

Classification:

Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) - Category 3
Specific Target Organ Toxicity - Repeated Exposure - Category 2
Skin Irritation - Category 2
Respiratory Sensitizer (Solid/Liquid) - Category 1
Skin Sensitizer - Category 1
Carcinogenicity - Category 1B
Eye Irritation - Category 2
Acute toxicity Inhalation - Category 1
Acute toxicity Oral - Category 5

Pictograms:



Signal Word:

Danger

Hazardous Statements - Health:

May cause respiratory irritation
May cause damage to organs through prolonged or repeated exposure.
Causes skin irritation
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause an allergic skin reaction
May cause cancer.
Causes serious eye irritation
May be harmful if swallowed
Fatal if inhaled

Precautionary Statements - General:

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.

Precautionary Statements - Prevention:

Use only outdoors or in a well-ventilated area.
Keep container tightly closed.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash 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.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.

Precautionary Statements - Response:

IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor,if you feel unwell.
IF ON SKIN: Wash with plenty of water.
Specific treatment (see First-aid measures on this SDS).
Take off contaminated clothing. And wash it before reuse.
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
If skin irritation or a rash occurs: Get medical advice/attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor.
Specific treatment is urgent (see Section 4 on this SDS)

Precautionary Statements - Storage:

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

Precautionary Statements - Disposal:

Dispose of contents/container to disposal recycling center. Waste management should be in full compliance with federal, state and local laws.

Hazards Not Otherwise Classified (HNOC):

Severe overexposure may lead to pulmonary edema.
Certain individuals may develop isocyanine sensitization (chemical asthma).

Additional hazard information:

Persons With Known Respiratory or Allergy Problems Must Not Be Exposed to This Product.

Acute toxicity of 15% of the mixture is unknown

SECTION 3) COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
0000101-68-8	4,4'-METHYLENEDIPHENYL DIISOCYANATE (MDI)	51% - 100%
0068477-30-5	Distillates (petroleum), catalytic reformer fractionator residue, intermediate-boiling	13% - 17%
Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality.		

SECTION 4) FIRST-AID MEASURES

Note to physician:

Eyes: Strain 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 material is a known skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burns.

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

Inhalation:

Remove source of exposure or move person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. If breathing has stopped, trained personnel should begin rescue breathing or, if the heart has stopped, immediately start cardiopulmonary resuscitation (CPR) or automated external defibrillation (AED). Avoid mouth-to-mouth contact by using a barrier device.

Eye Contact:

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 30 minutes or until medical aid is available. Take care not to rinse contaminated water into the unaffected eye or onto the face. Immediately call a POISON CENTER or doctor.

Skin Contact:

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Wash with plenty of lukewarm, gently flowing water for 15-20 minutes. If exposed or concerned: Get medical advice/attention. Wash contaminated clothing before re-use.

Ingestion:

Rinse mouth. Drink 1 or 2 glasses of water or milk. Do NOT induce vomiting. If vomiting occurs naturally, lie on your side, in the recovery position. If exposed, concerned or if you feel unwell: get medical advice/attention.

(Never give anything by mouth to an unconscious person.)

Most Important Symptoms and Effects, Both Acute and Delayed:

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 is not expected to result in absorption or amounts sufficient to cause other adverse effects. May stain skin.

As a liquid or dust may cause irritation, inflammation and or damage to sensitive eye tissue. Corneal injury is unlikely. Materials containing MDI may react with the moisture of the eye forming a thick material that may be difficult to wash from the eyes.

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

As a result of previous repeated overexposure or a single large dose, certain individuals develop isocyanine 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.

At room temperature, MDI vapors are minimal due to low vapor pressure. However, heating, foaming or otherwise dispersing (drumming, venting or pumping) operations may generate more vapor or aerosol concentrations of isocyanate. Excessive exposure may cause irritation of the eyes, upper respiratory tract and lungs. Severe overexposure may lead to pulmonary edema. Symptoms of pulmonary edema can be delayed up to 48 hours after exposure. Respiratory sensitization with asthma like symptoms may occur in susceptible individuals. MDI concentration below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized. Symptoms may include coughing, dryness of throat, headache, nausea, difficulty breathing and feeling of tightness in the chest. Effects may be delayed. Impaired lung function (decreased ventilators capacity) has been associated with overexposure to isocyanate.

This material is designed and intended to be pumped, not sprayed. MDI becomes more hazardous when atomized(sprayed).

Indication of Any Immediate Medical Attention and Special Treatment Needed:

The reaction of polyols and isocyanates generate heat. Contact of the reacting materials with skin or eyes can cause sever burns and may be difficult to remove from the affected areas. Immediately wash affected areas with plenty of water and seek medical attention. In addition, such contact increases the risk of exposure to isocyanate vapors.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Dry chemical, foam, carbon dioxide, halogenated agents or water. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Sand or earth may be used for small fires only.

Unsuitable Extinguishing Media:

Do not use direct water stream. Since this may cause fire to spread.

Specific Hazards in Case of Fire:

Burning produces noxious and toxic fumes. Avoid breathing smoke.

Combustion may produce carbon dioxide, carbon monoxide and nitrogen oxides.

Excessive pressure or temperature may cause explosive rupture of containers.

Fire-fighting Procedures:

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Special Protective Actions:

Wear NIOSH approved, protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure:

ELIMINATE all ignition sources (no smokes, flares, sparks or flames in immediate area).

Isolate hazard area and keep unnecessary people away. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

Do not touch or walk through spilled material.

If spilled material is cleaned up using a regulated solvent, the resulting mixture may be regulated.

Recommended Equipment:

Positive pressure, full-facepiece self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved).

Personal Precautions:

Avoid breathing vapor. Avoid contact with skin, eye or clothing. Never try to detect MDI vapor by odor. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental Precautions:

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning up:

Contain and collect spilled materials with non-combustible, absorbent material and place in a container for disposal according to local, state and federal laws and regulations. Saturate with water or decontamination solution, but do not seal the container with isocyanate mixture. Dispose via a licensed waster disposal contractor. Contaminated absorbent material may pose the same physical hazards as the product.

The area should be flushed with a decontamination solution. The decontamination solution is a 5-10% mixture of sodium carbonate and .5% liquid detergent in water solution or a 3% concentrated ammonium hydroxide and .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.

Note: Isocyanate will react with water and generate carbon dioxide. This could result in the rupture of any closed container.

SECTION 7) HANDLING AND STORAGE

General:

Wash hands after use.

Do not get in eyes, on skin or on clothing.

Do not breathe vapors or mists.

Use good personal hygiene practices.

Eating, drinking and smoking in work areas is prohibited.

Remove contaminated clothing and protective equipment before entering eating areas.

Eyewash stations and showers should be available in areas where this material is used and stored.

Use personal protective equipment when transferring material to or from drums, totes or other containers.

Ventilation Requirements:

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements:

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, naked lights, direct sunlight, strong oxidizers and any incompatibilities. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty container can retain residue and may be dangerous.

When stored between 60°F and 85°F (15° and 30°C) 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.

Protect from freezing. Should freezing occur, the material must be thawed thoroughly and mixed until uniform.

Opened containers must be handled properly to prevent moisture contamination.

SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye protection:

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

Skin Protection:

Wear clothing and gloves impervious to MDI under conditions of use.

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection:

A supplied air, full face piece, 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/OSHA approved and maintained. Air purifying (cartridge type) respirators are not approved for protections against isocyanates.

Appropriate Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Chemical Name	OSHA STEL (ppm)	OSHA TWA (mg/m3)	OSHA TWA (ppm)	OSHA STEL (mg/m3)	OSHA Carcinogen	OSHA Skin designation	OSHA Tables (Z1, Z2, Z3)	NIOSH TWA (mg/m3)	NIOSH TWA (ppm)	NIOSH STEL (mg/m3)	NIOSH STEL (ppm)	NIOSH Carcinogen
4,4'-METHYLENEDIPHENYL DIISOCYANATE (MDI)		0.2 ceiling	0.02 ceiling				1	0.050	0.005			
Distillates (petroleum), catalytic reformer fractionator residue, intermediate-boiling		2000	500				1					

Chemical Name	ACGIH TWA (mg/m3)	ACGIH TWA (ppm)	ACGIH STEL (mg/m3)	ACGIH STEL (ppm)	ACGIH TLV Basis	ACGIH Carcinogen	ACGIH Notations
4,4'-METHYLENEDIPHENYL DIISOCYANATE (MDI)	0.051	0.005			Resp sens		
Distillates (petroleum), catalytic reformer fractionator residue, intermediate-boiling							

resp - respiratory , sens - sensitization

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Density	10.31 lb/gal
% Solids By Weight	N/A
Density VOC	8.76 lb/gal
% VOC	85.00%
Specific Gravity	1.24

Appearance	Dark brown liquid
Odor Threshold	N/A
Odor Description	Mild Odor
pH	N/A

Water Solubility	Resin reacts slowly to liberate CO2 gas
Flammability	N/A
Flash Point Symbol	N/A
Flash Point (PMCC)	398 °F
Viscosity	N/A
Lower Explosion Level	N/A
Upper Explosion Level	N/A
Vapor Pressure	< 10 - 5 (NW HG)
Vapor Density (air = 1)	1.5 (MDI)
Freezing Point	N/A
Melting Point	N/A
Low Boiling Point	406 °F
High Boiling Point	N/A
Auto Ignition Temp	N.A.
Decomposition Pt	N/A
Evaporation Rate	Slower than ethyl ether
Coefficient Water/Oil	N/A

SECTION 10) STABILITY AND REACTIVITY

Stability:

Polyisocyanates are highly reactive chemicals and should be handled and stored in a way to avoid exposure to many common substances, including water and moisture. Material is stable when stored in sealed containers under normal conditions. Avoid extended exposure over 110 °F (45°C).

Conditions to Avoid:

Avoid heat, sparks, flame, high temperature, freezing and contact with incompatible materials.

Hazardous Reactions/Polymerization:

Reacts with incompatible materials. The reaction with water is very slow under 120°F (50°C), but is accelerated at higher temperatures and in the presence of alkalis, tertiary amines and metal compounds. Some reactions can be vigorous or even violent.

May polymerize with incompatible reactants especially strong bases, water or temperatures over 320°F (160°C). Possible evolution of carbon dioxide gas from overheating or exposure to contaminants may rupture closed containers.

Incompatible Materials:

Water, acids, bases, alcohols, metal compounds.

Hazardous Decomposition Products:

Carbon dioxide, carbon monoxide, nitrogen oxides

SECTION 11) TOXICOLOGICAL INFORMATION

Likely Route of Exposure:

Inhalation, ingestion, skin absorption, eye contact.

Skin Corrosion/Irritation:

Causes skin irritation

Serious Eye Damage/Irritation:

Causes serious eye irritation

Respiratory/Skin Sensitization:

May cause allergy or asthma symptoms or breathing difficulties if inhaled

May cause an allergic skin reaction

Germ Cell Mutagenicity:

No data available

Carcinogenicity:

May cause cancer.

Reproductive Toxicity:

No data available

Specific Target Organ Toxicity - Single Exposure:

May cause respiratory irritation

Specific Target Organ Toxicity - Repeated Exposure:

May cause damage to organs through prolonged or repeated exposure.

Aspiration Hazard:

No data available

Acute Toxicity:

No data available

0000101-68-8 4,4'-METHYLENEDIPHENYL DIISOCYANATE (MDI)

LC50 (rat): 369-490 mg/m3 (aerosol) (4-hour exposure) (1)

LC50 (rat): 178 mg/m3 (17.4 ppm) (duration of exposure not reported) (2)

LD50 (oral, rat): greater than 10,000 mg/kg (1,2)

LD50 (dermal, rabbit): greater than 10,000 mg/kg (1)

LD50 (oral, mouse): 2,200 mg/kg (3)

SECTION 12) ECOLOGICAL INFORMATION

Toxicity:

No data available

Persistence and Degradability:

No data available.

Bio-accumulative Potential:

No data available.

Mobility in Soil:

No data available.

Other Adverse Effects:

No data available.

SECTION 13) DISPOSAL CONSIDERATIONS

Waste Disposal:

Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state and local laws.

The generation of waste should be avoided or minimized whenever possible. Chemical waste, even small quantities, should never be poured down drains, sewers or waterways.

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 decontamination solution into the drum making sure the walls are well rinsed. Let the drum/container soak unsealed for 48 hours. Pour out the decontamination solution and triple rise the empty container. Puncture or otherwise destroy the rinsed container before disposal. See Section 6 for decontamination solution.

Empty Containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

Chemical additions, processing, storage, or otherwise altering this material may make the waste management information presented in this SDS incomplete, inaccurate or otherwise inappropriate. Waste characterization and disposal compliance is the responsibility solely of the party generating the waste or deciding to discard or dispose of the material.

SECTION 14) TRANSPORT INFORMATION

U.S. DOT Information:

UN number: UN2810
Proper shipping name: Toxic, liquids, organic, n.o.s. (4,4"-METHYLENEDIPHENYL DIISOCYANATE)
Hazard class: 6
Packaging group: I
Hazardous substance (RQ): No data available
Toxic-Inhalation Hazard: No data available
Marine Pollutant: No data available
Note / Special Provision: No data available

IMDG Information:

UN number: UN2810
Proper shipping name: Toxic, liquids, organic, n.o.s. (4,4"-METHYLENEDIPHENYL DIISOCYANATE)
Hazard class: 6
Packaging group: I
Marine Pollutant: No data available
Note / Special Provision: No data available

IATA Information:

UN number: UN2810
Hazard class: 6
Packaging group: I
Proper shipping name: Toxic, liquids, organic, n.o.s. (4,4"-METHYLENEDIPHENYL DIISOCYANATE)
Note / Special Provision: No data available

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0000101-68-8	4,4'-METHYLENEDIPHENYL DIISOCYANATE (MDI)	51% - 100%	CERCLA,SARA312,VOC,IARCCarcinogen,TSCA
0068477-30-5	Distillates (petroleum), catalytic reformer fractionator residue, intermediate-boiling	13% - 17%	SARA312,TSCA,TSCA_UVCB - CHEMICAL SUBSTANCES OF UNKNOWN OR VARIABLE COMPOSITION, COMPLEX REACTION PRODUCTS AND BIOLOGICAL MATERIALS

SECTION 16) OTHER INFORMATION

Glossary:

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG-Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- ESE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ- Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA- Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

HMIS

Health	*	4
FLAMMABILITY		1
Physical Hazard		1
Personal Protection		J

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks

Version 1.0:

Revision Date: May 01, 2015

First Edition.

DISCLAIMER

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

SAFETY DATA SHEET

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

Product ID: IA-68100 B
Product Name: Quick Foam Fine Urethane (Side B)
Revision Date: May 01, 2016 **Date Printed:** Feb 13, 2017
Version: 1.0 **Supersedes Date:** N.A.
Manufacturer's Name: Mar-flex Waterproofing & Building Products
Address: 500 Business Parkway Carlisle, OH, US, 45005
Emergency Phone: Chem-Trec: 1-800-424-9300
Information Phone Number: 513-422-7285
Fax: 513-422-7282
Product/Recommended Uses:

SECTION 2) HAZARDS IDENTIFICATION

Classification:

Chronic aquatic toxicity - Category 3

Pictograms:

None

Signal Word:

No signal word available.

Hazardous Statements - Environmental:

Harmful to aquatic life with long lasting effects

Precautionary Statements - General:

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

Keep out of reach of children.

Read label before use.

Precautionary Statements - Prevention:

Avoid release to the environment.

Precautionary Statements - Response:

No precautionary statement available.

Precautionary Statements - Storage:

No precautionary statement available.

Precautionary Statements - Disposal:

Dispose of contents/container to disposal recycling center. Waste management should be in full compliance with federal, state and local laws.

Hazards Not Otherwise Classified (HNOC):

Prolonged skin contact will cause irritation.

Eye contact will cause irritation. Tertiary amines can produce a blurring of vision against a general bluish haze and the appearance of halos around bright objects (referred to as "blue haze"). Tertiary amines can also cause severe conjunctivitis.

The tertiary amines, from this blend could 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, thirst, circulatory collapse and coma.

This blend contains tertiary amine amounts less than what is required to report as hazardous, however the tertiary amine component is severely irritating to the upper respiratory tract and mucous membranes of the nose and throat and can result in coughing, chest discomfort and headache.

Additional hazard information:

Heating, foaming or otherwise mechanically dispersing (drumming, venting or pumping) operations of this blend may generate more vapor or aerosol concentrations of its components.

SECTION 3) COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
0006846-50-0	2,2,4-TRIMETHYL-1,3-PENTANEDIOL BIS(2-METHYLPRO	20% - 40%

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality.

SECTION 4) FIRST-AID MEASURES

Note to physician:

Eyes: Strain 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 material is a known skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burns. If burned, treat as thermal burn.

Inhalation:

Remove source of exposure or move person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by the POISON CENTER/doctor.

Eye Contact:

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 15-20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

Skin Contact:

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Wash with plenty of lukewarm, gently flowing water for 15-20 minutes. If skin irritation occurs or you feel unwell: Get medical advice/attention. Wash contaminated clothing before re-use.

Ingestion:

Rinse mouth. Drink 1 or 2 glasses of water or milk. Do NOT induce vomiting unless directed to do so by medical personnel. If vomiting occurs naturally, lie on your side, in the recovery position. Seek immediate medical attention.

Most Important Symptoms and Effects, Both Acute and Delayed:

Eye Contact: This blend will cause irritation on contact. Symptoms include watering or discomfort of the eyes with marked excess redness and swelling of the conjunctiva and chemical burns of the cornea.

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

Indication of Any Immediate Medical Attention and Special Treatment Needed:

No data available.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Dry chemical, foam, carbon dioxide. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Sand or earth may be used for small fires only.

Unsuitable Extinguishing Media:

Do not use direct water stream. Since this may cause fire to spread.

Specific Hazards in Case of Fire:

Hazardous decomposition products formed under fire conditions - Carbon oxides, Nitrogen oxides.

Burning produces noxious and toxic fumes.

Fire-fighting Procedures:

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

If possible, contain fire run-off water.

Special Protective Actions:

Wear NIOSH approved, protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure:

ELIMINATE all ignition sources (no smokes, flares, sparks or flames in immediate area).

Isolate hazard area and keep unnecessary people away. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

Do not touch or walk through spilled material.

If spilled material is cleaned up using a regulated solvent, the resulting mixture may be regulated.

Recommended Equipment:

Positive pressure, full-facepiece self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved).

Personal Precautions:

Avoid breathing vapor. Avoid contact with skin, eye or clothing. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental Precautions:

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers. Notify local health officials and other appropriate agencies if such a contamination should occur.

Methods and Materials for Containment and Cleaning up:

Contain and collect spilled materials with non-combustible, absorbent material and place in a container for disposal according to local regulations. The spill area should then be washed down with soap and water to dilute and remove traces of material. Ventilate area to remove the remaining vapors. Dispose via a licensed waster disposal contractor. Contaminated absorbent material may pose the same physical hazards as the product.

SECTION 7) HANDLING AND STORAGE

General:

Wash hands after use.

Do not get in eyes, on skin or on clothing.

Do not breathe vapors or mists.

Use good personal hygiene practices.

Eating, drinking and smoking in work areas is prohibited.

Remove contaminated clothing and protective equipment before entering eating areas.

Eyewash stations and showers should be available in areas where this material is used and stored.

Ventilation Requirements:

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements:

Storage Temperature: 4.4°C - 32.2°C (40°F - 90°F).

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, naked lights, direct sunlight, strong oxidizers and any incompatibilities. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty container can retain residue and may be dangerous.

When stored between 60°F and 85°F (15° and 30°C) 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.

Protect from freezing. Should freezing occur, the material must be thawed thoroughly and mixed until uniform.

SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye protection:

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

Skin Protection:

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection:

A supplied air, full face piece, 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/OSHA approved and maintained. Air purifying (cartridge type) respirators are not approved for protections against isocyanates.

Appropriate Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Chemical Name	OSHA STEL (ppm)	OSHA TWA (mg/m3)	OSHA TWA (ppm)	OSHA STEL (mg/m3)	OSHA Carcinogen	OSHA Skin designation	OSHA Tables (Z1, Z2, Z3)	NIOSH TWA (mg/m3)	NIOSH TWA (ppm)	NIOSH STEL (mg/m3)	NIOSH STEL (ppm)	NIOSH Carcinogen
No applicable chemical	-	-	-	-	-	-	-	-	-	-	-	-

Chemical Name	ACGIH TWA (mg/m3)	ACGIH TWA (ppm)	ACGIH STEL (mg/m3)	ACGIH STEL (ppm)	ACGIH TLV Basis	ACGIH Carcinogen	ACGIH Notations
No applicable chemical	-	-	-	-	-	-	-

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Density	9.01 lb/gal
% Solids By Weight	N/A
Density VOC	0.00 lb/gal
% VOC	0.00%
Specific Gravity	1.08
Appearance	Dark brown liquid
Odor Threshold	N/A
Odor Description	Slightly musty
pH	N/A
Water Solubility	Slight.
Flammability	N/A
Flash Point Symbol	>
Flash Point	93.3 °C
Viscosity	30-40 Centipoise at 77°F (25°C)
Lower Explosion Level	N/A
Upper Explosion Level	N/A
Vapor Pressure	N/A
Vapor Density	N/A

Freezing Point	N/A
Melting Point	N/A
Low Boiling Point	N/A
High Boiling Point	N/A
Auto Ignition Temp	N.A.
Decomposition Pt	N/A
Evaporation Rate	N/A
Coefficient Water/Oil	N/A

SECTION 10) STABILITY AND REACTIVITY

Stability:

The product is stable under normal storage conditions.

Conditions to Avoid:

Avoid heat, sparks, flame, high temperature, freezing and contact with incompatible materials.

Hazardous Reactions/Polymerization:

Will not occur

Incompatible Materials:

Strong oxidizing agents, acids, bases and isocyanates.

Hazardous Decomposition Products:

Combustion produces toxic oxides of carbon.

SECTION 11) TOXICOLOGICAL INFORMATION

RESPIRATORY/SKIN SENSITIZATION:

May cause an allergic skin reaction.

Likely Route of Exposure:

Inhalation, ingestion, skin absorption, eye contact.

Skin Corrosion/Irritation:

Causes skin irritation.

Serious Eye Damage/Irritation:

Causes eye irritation

Respiratory/Skin Sensitization:

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

Germ Cell Mutagenicity:

No data available

Carcinogenicity:

No data available

Reproductive Toxicity:

No data available

Specific Target Organ Toxicity - Single Exposure:

May cause respiratory irritation.

Specific Target Organ Toxicity - Repeated Exposure:

No data available

Aspiration Hazard:

No data available

Acute Toxicity:

No data available

SECTION 12) ECOLOGICAL INFORMATION

Toxicity:

Harmful to aquatic life with long lasting effects

Persistence and Degradability:

No data available.

Bio-accumulative Potential:

No data available.

Mobility in Soil:

No data available.

Other Adverse Effects:

No data available.

SECTION 13) DISPOSAL CONSIDERATIONS

Waste Disposal:

Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state and local laws.

Empty Containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

Chemical additions, processing, storage, or otherwise altering this material may make the waste management information presented in this SDS incomplete, inaccurate or otherwise inappropriate. Waste characterization and disposal compliance is the responsibility solely of the party generating the waste or deciding to discard or dispose of the material.

The generation of waste should be avoided or minimized whenever possible. Chemical waste, even small quantities, should never be poured down drains, sewers or waterways.

SECTION 14) TRANSPORT INFORMATION

U.S. DOT Information:

UN number: Not Regulated
Proper shipping name: N/A (N/A)
Hazard class: N/A
Packaging group: N/A
Hazardous substance (RQ): No data available
Toxic-Inhalation Hazard: No data available
Marine Pollutant: No data available
Note / Special Provision: No data available

IMDG Information:

UN number: Not Regulated
Proper shipping name: N/A (N/A)
Hazard class: N/A
Packaging group: N/A
Marine Pollutant: No data available
Note / Special Provision: No data available

IATA Information:

UN number: Not Regulated
Hazard class: N/A
Packaging group: N/A
Proper shipping name: N/A (N/A)
Note / Special Provision: No data available

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0006846-50-0	2,2,4-TRIMETHYL-1,3-PENTANEDIOL BIS(2-METHYLPRO	20% - 40%	SARA312,TSCA

SECTION 16) OTHER INFORMATION

Glossary:

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG-Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- ESE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ- Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA- Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

HMIS

Health	/ 2
FLAMMABILITY	1
Physical Hazard	1
Personal Protection	J

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks

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