

TremGlaze LEF

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Tremco Polyurethane Foam Cleaner SDS

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TremGlaze LEF SDS

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SAFETY DATA SHEET

1. Identification

Material name: TREMCO POLYURETHANE FOAM CLEANER - 12/CS
Material: 001922GC501

Recommended use and restriction on use

Recommended use: Sealant
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information

Tremco U.S Sealants
3735 Green Road
Beachwood OH 44122
US

Contact person:	EH&S Department
Telephone:	216-292-5000
Emergency telephone number:	1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Flammable aerosol	Category 1
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Health Hazards

Serious Eye Damage/Eye Irritation	Category 2A
Germ Cell Mutagenicity	Category 1B
Carcinogenicity	Category 1A

Unknown toxicity - Health

Acute toxicity, oral	30 %
Acute toxicity, dermal	30 %
Acute toxicity, inhalation, vapor	100 %
Acute toxicity, inhalation, dust or mist	100 %

Unknown toxicity - Environment

Acute hazards to the aquatic environment	30 %
Chronic hazards to the aquatic environment	100 %

Label Elements

Hazard Symbol:



Signal Word:	Danger
Hazard Statement:	Extremely flammable aerosol. Causes serious eye irritation. May cause genetic defects. May cause cancer. Pressurized container: May burst if heated.
Precautionary Statement:	
Prevention:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.
Response:	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If exposed or concerned: Get medical advice/attention.
Storage:	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Store locked up.
Disposal:	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
Other hazards which do not result in GHS classification:	None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Acetone	67-64-1	60 - 100%
Propane	74-98-6	15 - 40%
Butane	106-97-8	5 - 10%
Isobutane	75-28-5	5 - 10%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Ingestion:	Rinse mouth thoroughly.
Inhalation:	Move to fresh air.
Skin Contact:	Remove contaminated clothing and wash the skin thoroughly with soap and water after work.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.

Most important symptoms/effects, acute and delayed

Symptoms: Respiratory tract irritation.

Indication of immediate medical attention and special treatment needed

Treatment: Symptoms may be delayed.

5. Fire-fighting measures

General Fire Hazards: Use water spray to keep fire-exposed containers cool. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical: Vapors may travel considerable distance to a source of ignition and flash back.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind.

Methods and material for containment and cleaning up: Stop the flow of material, if this is without risk. Absorb with sand or other inert absorbent.

Environmental Precautions: Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling: Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Avoid contact with eyes. Wash hands thoroughly after handling. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use.

Conditions for safe storage, including any incompatibilities: Store locked up. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	type	Exposure Limit Values	Source
Acetone	TWA	250 ppm	US. ACGIH Threshold Limit Values (03 2015)
	STEL	500 ppm	US. ACGIH Threshold Limit Values (03 2015)
Propane	PEL	1,000 ppm 2,400 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	PEL	1,000 ppm 1,800 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Butane	STEL	1,000 ppm	US. ACGIH Threshold Limit Values (02 2013)
Isobutane	STEL	1,000 ppm	US. ACGIH Threshold Limit Values (02 2013)

Chemical name	type	Exposure Limit Values	Source
Acetone	STEL	500 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	250 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Acetone	TWAEV	500 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
	STEL	750 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)

Acetone	STEL	1,000 ppm	2,380 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
	TWA	500 ppm	1,190 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Propane	TWA	1,000 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Propane	TWAEV	1,000 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Propane	TWA	1,000 ppm	1,800 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Butane	STEL	750 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	600 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Butane	TWAEV	800 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Butane	TWA	800 ppm	1,900 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Isobutane	TWA	1,000 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Isobutane	TWAEV	800 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)

Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
Acetone (acetone: Sampling time: End of shift.)	25 mg/l (Urine)	ACGIH BEI (03 2015)

Appropriate Engineering Controls

No data available.

Individual protection measures, such as personal protective equipment

General information:	Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Eye/face protection:	Wear safety glasses with side shields (or goggles).
Skin Protection	
Hand Protection:	No data available.
Other:	No data available.
Respiratory Protection:	In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.
Hygiene measures:	Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Avoid contact with eyes. When using do not smoke.

9. Physical and chemical properties**Appearance**

Physical state:	Aerosols
Form:	Aerosols
Color:	Colorless
Odor:	Strong petroleum/solvent
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	No data available.
Flash Point:	-97 °C -143 °F
Evaporation rate:	Slower than Ether
Flammability (solid, gas):	Yes
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	Vapors are heavier than air and may travel along the floor and in the bottom of containers.
Relative density:	0.699
Solubility(ies)	
Solubility in water:	Practically Insoluble

Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	Avoid heat or contamination.
Incompatible Materials:	Avoid contact with oxidizing agents (e.g. nitric acid, peroxides and chromates).
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information**Information on likely routes of exposure**

Ingestion:	May be ingested by accident. Ingestion may cause irritation and malaise.
Inhalation:	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
Skin Contact:	Moderately irritating to skin with prolonged exposure.
Eye contact:	Causes serious eye irritation.

Information on toxicological effects**Acute toxicity (list all possible routes of exposure)**

Oral Product:	No data available.
Dermal Product:	No data available.
Inhalation Product:	No data available.
Specified substance(s):	
Acetone	LC 50 (Rat, 4 h): 76 mg/l
Propane	LC 50 (Rat, 4 h): > 13023 ppm

Butane LC 50 (Rat, 4 h): > 13023 ppm

Isobutane LC 50 (Rat, 4 h): > 13023 ppm

Repeated dose toxicity

Product: No data available.

Skin Corrosion/Irritation

Product: No data available.

Specified substance(s):

Acetone in vivo (Rabbit): Experimental result, Supporting study

Serious Eye Damage/Eye Irritation

Product: No data available.

Specified substance(s):

Acetone in vivo (Rabbit, 24 hrs): Minimum grade of severe eye irritant

Propane Irritating

Butane Not irritating

Respiratory or Skin Sensitization

Product: No data available.

Carcinogenicity

Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ Cell Mutagenicity**In vitro**

Product: No data available.

In vivo

Product: No data available.

Reproductive toxicity**Product:** No data available.**Specific Target Organ Toxicity - Single Exposure****Product:** No data available.**Specific Target Organ Toxicity - Repeated Exposure****Product:** No data available.**Aspiration Hazard****Product:** No data available.**Other effects:**

No data available.

12. Ecological information**Ecotoxicity:****Acute hazards to the aquatic environment:****Fish****Product:** No data available.**Specified substance(s):**Acetone LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 5,490 - 7,030 mg/l Mortality**Aquatic Invertebrates****Product:** No data available.**Specified substance(s):**Acetone LC 50 (Water flea (*Daphnia magna*), 24 h): 10 mg/l Mortality
EC 50 (Water flea (*Daphnia magna*), 48 h): 21,600 - 23,900 mg/l Intoxication
LC 50 (Scud (*Gammarus fasciatus*), 96 h): > 100 mg/l Mortality
LC 50 (Asiatic clam (*Corbicula manilensis*), 96 h): > 20,000 mg/l Mortality
LC 50 (Water flea (*Daphnia magna*), 96 h): > 100 mg/l Mortality**Chronic hazards to the aquatic environment:****Fish****Product:** No data available.**Aquatic Invertebrates****Product:** No data available.**Toxicity to Aquatic Plants****Product:** No data available.**Persistence and Degradability**

Biodegradation
Product: No data available.

BOD/COD Ratio
Product: No data available.

Bioaccumulative Potential
Bioconcentration Factor (BCF)
Product: No data available.

Partition Coefficient n-octanol / water (log Kow)
Product: No data available.

Specified substance(s):

Acetone	Log Kow: -0.24
Propane	Log Kow: 2.36
Butane	Log Kow: 2.89
Isobutane	Log Kow: 2.76

Mobility in Soil: No data available.

Other Adverse Effects: No data available.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: No data available.

14. Transport information

TDG:

UN1950, AEROSOLS, 2.1

CFR / DOT:

UN1950, Aerosols, 2.1

IMDG:

UN1950, AEROSOLS, 2.1

Further Information:

The above shipping description may not be accurate for all container sizes and all modes of transportation. Please refer to Bill of Lading.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Acetone	5000 lbs.
Propane	100 lbs.
Butane	100 lbs.
Isobutane	100 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Fire Hazard
Immediate (Acute) Health Hazards
Delayed (Chronic) Health Hazard

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Acetone	5000 lbs.
Propane	100 lbs.
Butane	100 lbs.
Isobutane	100 lbs.

SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Acetone	500 lbs
Propane	500 lbs
Butane	500 lbs
Isobutane	500 lbs

SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Propane	10000 lbs
Butane	10000 lbs
Isobutane	10000 lbs

US State Regulations

US. California Proposition 65

No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity

Acetone
Propane
Butane
Isobutane

US. Massachusetts RTK - Substance List

Chemical Identity

Acetone
Propane
Butane
Isobutane

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Acetone
Propane
Butane
Isobutane

US. Rhode Island RTK

Chemical Identity

Acetone
Propane
Butane
Isobutane

Other Regulations:

Regulatory VOC (less water and exempt solvent):	551 g/l
VOC Method 310:	30.00 %

Inventory Status:

Australia AICS:	All components in this product are listed on or exempt from the Inventory.
Canada DSL Inventory List:	All components in this product are listed on or exempt from the Inventory.
EINECS, ELINCS or NLP:	All components in this product are listed on or exempt from the Inventory.
Japan (ENCS) List:	All components in this product are listed on or exempt from the Inventory.
China Inv. Existing Chemical Substances:	All components in this product are listed on or

	exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	All components in this product are listed on or exempt from the Inventory.
Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	All components in this product are listed on or exempt from the Inventory.
US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals:	All components in this product are listed on or exempt from the Inventory.
Japan ISHL Listing:	All components in this product are listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.

16. Other information, including date of preparation or last revision

Revision Date:	08/05/2016
Version #:	1.2
Further Information:	No data available.
Disclaimer:	For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

SAFETY DATA SHEET

1. Identification

Material name: TREMGLAZE LEF GUN GRADE FOAM SEALANT
Material: 788792GG700

Recommended use and restriction on use

Recommended use: Sealant
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information

Tremco U.S Sealants
3735 Green Road
Beachwood OH 44122
US

Contact person: EH&S Department
Telephone: 216-292-5000
Emergency telephone number: 1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Flammable aerosol Category 1

Health Hazards

Skin Corrosion/Irritation Category 2
Serious Eye Damage/Eye Irritation Category 2A
Germ Cell Mutagenicity Category 1B
Carcinogenicity Category 1A

Unknown toxicity - Health

Acute toxicity, oral 66.9 %
Acute toxicity, dermal 66.9 %
Acute toxicity, inhalation, vapor 100 %
Acute toxicity, inhalation, dust or mist 85 %

Unknown toxicity - Environment

Acute hazards to the aquatic environment 100 %
Chronic hazards to the aquatic environment 100 %

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement: Extremely flammable aerosol.
Causes skin irritation.
Causes serious eye irritation.
May cause genetic defects.
May cause cancer.
Pressurized container: May burst if heated.

Precautionary Statement:
Prevention:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

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

Storage: Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Store locked up.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification: None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Polymethylene polyphenyl isocyanate	9016-87-9	40 - 70%
Methyl ether (Dimethyl ether)	115-10-6	15 - 40%
Isobutane	75-28-5	5 - 10%
Propane	74-98-6	1 - 5%
Butane	106-97-8	0.5 - 1.5%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Ingestion:	Call a POISON CENTER/doctor/.../if you feel unwell. Rinse mouth.
Inhalation:	Move to fresh air.
Skin Contact:	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. Get medical attention.
Eye contact:	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.

Most important symptoms/effects, acute and delayed

Symptoms:	Respiratory tract irritation. Prolonged or repeated contact with skin may cause redness, itching, irritation and eczema/chapping.
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Indication of immediate medical attention and special treatment needed

Treatment:	Symptoms may be delayed.
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5. Fire-fighting measures

General Fire Hazards:	Use water spray to keep fire-exposed containers cool. Fight fire from a protected location. Move containers from fire area if you can do so without risk.
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Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media:	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical:	Vapors may travel considerable distance to a source of ignition and flash back.

Special protective equipment and precautions for firefighters

Special fire fighting procedures:	No data available.
Special protective equipment for fire-fighters:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind. See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.

Methods and material for containment and cleaning up:

Stop the flow of material, if this is without risk. Absorb with sand or other inert absorbent.

Environmental Precautions:

Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling:

Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Wash hands thoroughly after handling. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Avoid contact with eyes. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Avoid contact with skin.

Conditions for safe storage, including any incompatibilities:

Store locked up. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	type	Exposure Limit Values	Source
Polymethylene polyphenyl isocyanate	TWA	0.005 ppm	US. ACGIH Threshold Limit Values (2011)
	Ceiling	0.02 ppm 0.2 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Isobutane	STEL	1,000 ppm	US. ACGIH Threshold Limit Values (02 2013)
Propane	PEL	1,000 ppm 1,800 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Butane	STEL	1,000 ppm	US. ACGIH Threshold Limit Values (02 2013)

Chemical name	type	Exposure Limit Values	Source
Polymethylene polyphenyl isocyanate	TWA	0.005 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	CEILING	0.01 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	0.005 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	CEILING	0.01 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Polymethylene polyphenyl isocyanate	TWAEV	0.005 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
	CEV	0.02 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)

Polymethylene polyphenyl isocyanate	TWA	0.005 ppm	0.051 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Methyl ether (Dimethyl ether)	TWA	1,000 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Isobutane	TWA	1,000 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Isobutane	TWAEV	800 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Propane	TWA	1,000 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Propane	TWAEV	1,000 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Propane	TWA	1,000 ppm	1,800 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)

Appropriate Engineering Controls No data available.

Individual protection measures, such as personal protective equipment

General information: Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Eye/face protection: Wear safety glasses with side shields (or goggles).

Skin Protection

Hand Protection: No data available.

Other: Wear suitable protective clothing. Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

Respiratory Protection: In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

Hygiene measures: Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Avoid contact with eyes. When using do not smoke. Wash contaminated clothing before reuse. Avoid contact with skin.

9. Physical and chemical properties

Appearance

Physical state:	Aerosols
Form:	Aerosols
Color:	Green
Odor:	Strong petroleum/solvent
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	-11 °C 12 °F
Flash Point:	-97 °C -143 °F
Evaporation rate:	Slower than Ether
Flammability (solid, gas):	Extremely flammable aerosol.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	Vapors are heavier than air and may travel along the floor and in the bottom of containers.
Relative density:	0.97
Solubility(ies)	
Solubility in water:	Practically Insoluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	Avoid heat or contamination.

Incompatible Materials: Avoid contact with oxidizing agents (e.g. nitric acid, peroxides and chromates).

Hazardous Decomposition Products: Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Ingestion: May be harmful if swallowed.

Inhalation: In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.

Skin Contact: May be harmful in contact with skin. Causes skin irritation.

Eye contact: Causes serious eye irritation.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral Product: ATEmix: 2,574.44 mg/kg

Dermal Product: ATEmix: 2,206.67 mg/kg

Inhalation Product: No data available.

Repeated dose toxicity Product: No data available.

Skin Corrosion/Irritation Product: No data available.

Serious Eye Damage/Eye Irritation Product: No data available.

Specified substance(s):

Methyl ether (Dimethyl ether)	Irritating
Propane	Irritating
Butane	Not irritating

Respiratory or Skin Sensitization Product: No data available.

Carcinogenicity**Product:** No data available.**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ Cell Mutagenicity**In vitro****Product:** No data available.**In vivo****Product:** No data available.**Reproductive toxicity****Product:** No data available.**Specific Target Organ Toxicity - Single Exposure****Product:** No data available.**Specific Target Organ Toxicity - Repeated Exposure****Product:** No data available.**Aspiration Hazard****Product:** No data available.**Other effects:**

No data available.

12. Ecological information

Ecotoxicity:**Acute hazards to the aquatic environment:****Fish****Product:** No data available.**Aquatic Invertebrates****Product:** No data available.**Chronic hazards to the aquatic environment:**

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Toxicity to Aquatic Plants
Product: No data available.

Persistence and Degradability

Biodegradation
Product: No data available.

BOD/COD Ratio
Product: No data available.

Bioaccumulative Potential

Bioconcentration Factor (BCF)
Product: No data available.

Partition Coefficient n-octanol / water (log Kow)
Product: No data available.

Specified substance(s):

Methyl ether (Dimethyl ether)	Log Kow: 0.10
Isobutane	Log Kow: 2.76
Propane	Log Kow: 2.36
Butane	Log Kow: 2.89

Mobility in Soil: No data available.

Other Adverse Effects: No data available.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: No data available.

14. Transport information

TDG:

00000016908

UN1950, AEROSOLS, 2.1

CFR / DOT:

UN1950, Aerosols, 2.1

IMDG:

UN1950, AEROSOLS, 2.1

Further Information:

The above shipping description may not be accurate for all container sizes and all modes of transportation. Please refer to Bill of Lading.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Polymethylene	5000 lbs.
polyphenyl isocyanate	
Methyl ether (Dimethyl ether)	100 lbs.
Isobutane	100 lbs.
Propane	100 lbs.
Butane	100 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Fire Hazard
Immediate (Acute) Health Hazards
Delayed (Chronic) Health Hazard

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Polymethylene	5000 lbs.
polyphenyl isocyanate	
Methyl ether (Dimethyl ether)	100 lbs.
Isobutane	100 lbs.
Propane	100 lbs.
Butane	100 lbs.

SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Polymethylene polyphenyl isocyanate	500 lbs
Methyl ether (Dimethyl ether)	500 lbs
Isobutane	500 lbs
Propane	500 lbs
Butane	500 lbs

SARA 313 (TRI Reporting)

<u>Chemical Identity</u>
Polymethylene polyphenyl isocyanate

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Methyl ether (Dimethyl ether)	10000 lbs
Isobutane	10000 lbs
Propane	10000 lbs
Butane	10000 lbs

US State Regulations**US. California Proposition 65**

No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act

<u>Chemical Identity</u>
Polymethylene polyphenyl isocyanate
Methyl ether (Dimethyl ether)
Isobutane
Propane

US. Massachusetts RTK - Substance List

<u>Chemical Identity</u>
Polymethylene polyphenyl isocyanate
Methyl ether (Dimethyl ether)
Isobutane
Propane

US. Pennsylvania RTK - Hazardous Substances

<u>Chemical Identity</u>
Polymethylene polyphenyl isocyanate
Methyl ether (Dimethyl ether)
Isobutane
Propane

US. Rhode Island RTK

Chemical Identity

Polymethylene polyphenyl isocyanate
Methyl ether (Dimethyl ether)
Isobutane
Propane

Other Regulations:

Regulatory VOC (less water and exempt solvent):	206 g/l
VOC Method 310:	21.27 %

Inventory Status:

Australia AICS:	One or more components in this product are not listed on or exempt from the Inventory.
Canada DSL Inventory List:	All components in this product are listed on or exempt from the Inventory.
EINECS, ELINCS or NLP:	One or more components in this product are not listed on or exempt from the Inventory.
Japan (ENCS) List:	One or more components in this product are not listed on or exempt from the Inventory.
China Inv. Existing Chemical Substances:	One or more components in this product are not listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	One or more components in this product are not listed on or exempt from the Inventory.
Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	One or more components in this product are not listed on or exempt from the Inventory.
US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals:	One or more components in this product are not listed on or exempt from the Inventory.
Japan ISHL Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.

16. Other information, including date of preparation or last revision**Revision Date:** 05/26/2016**Version #:** 1.2**Further Information:** No data available.**Disclaimer:** For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.