

**This information is for components in their liquid state for transit purposes. Cured foam is an inert solid.

SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Guardian Energy Technologies, Inc.
2033 Milwaukee Ave #136
Riverwoods, IL 60015 USA
1-800-516-0949

Emergency Phone Number (Chemtrec): 1-800-424-9300 (#217866)
Outside of U.S.A., call collect: 001-703-527-3887

Product Identifier: Foam It Green Spray Foam Insulation Kits | Component A

Other Means of Identification: Polymeric MDI mixture.

Recommended Use: Component in polyurethane foam systems.

SECTION 2 – HAZARDS IDENTIFICATION

OSHA/GHS Classification:

Compressed Gas
Respiratory Sensitizer Category 1
Skin Sensitizer Category 1
Skin Irritant Category 2
Eye Irritant Category 2B
Specific Organ Toxicity – Single Exposure Category 3

Label Elements:

Signal Word: DANGER

Pictogram(s):



Hazard Statement(s):

H280: Contains gas under pressure; may explode if heated
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H320: Causes eye irritation.
H334: May cause allergy or asthma like symptoms or breathing difficulties if inhaled.
H335+H336: May cause respiratory irritation, drowsiness, or dizziness.

Precautionary Statement(s):

P102: Keep out of reach of children.
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P251: Pressurized container: Do not pierce or burn, even after use.
P261: Avoid breathing vapor, mist, or spray.
P262: Do not get in eyes, on skin, or on clothing.
P264: Wash hands thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P272: Contaminated work clothing must not be allowed out of the workplace.
P281: Wear protective gloves/protective clothing/eye protection/ face protection.
P285: In case of inadequate ventilation: wear respiratory protection.
P302+P352+P333+P313: IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical attention.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical attention.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+P312: If experiencing respiratory symptoms or feel unwell: Call a POISON CENTER or doctor.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P362: Take off contaminated clothing and wash it before reuse.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.
 P410: Protect from sunlight.
 P411: Store at temperatures not exceeding 120°F (48°C).
 P412: Do not expose to temperatures exceeding 250°F (121°C).
 P501: Dispose of contents/container in accordance with local, state, national, and international regulations.

Hazards Not Otherwise Classified:

Tetrafluoroethane vapors may displace oxygen and cause asphyxiation. System is pressurized.

1% of the mixture consists of ingredient(s) of unknown acute toxicity

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Components	CAS #	% by Weight
Polymethylene polyphenyl isocyanate containing 4,4' Methylene bisphenyl isocyanate	009016-87-9 000101-68-8	90-100%
Tetrafluoroethane	811-97-2	5-10%

SECTION 4 - FIRST AID MEASURES

Emergency and First Aid Procedures:

Eyes: Flush eyes with large amounts of water for at least 15 minutes. Get medical attention.

Skin: Wash skin thoroughly with large amounts of water. Consult a physician if irritation develops or persists. Remove contaminated clothing and wash before re-use. An MDI skin decontamination study demonstrated that cleaning very soon after exposure is important, and that a Polyglycol-based skin cleanser or corn oil may be more effective than soap and water.

Inhalation: If affected by vapors, remove patient to fresh air and get medical attention. Give oxygen or artificial respiration if necessary. Do not give stimulants. Epinephrine and similar drugs may adversely affect the heart due to a possible risk of eliciting cardiac dysrhythmias.

Ingestion: If swallowed, do not induce vomiting. Get medical attention immediately. The hazard of aspirating material into the lungs is greater than the hazard associated with allowing material to progress through the intestinal tract.

NOTE TO PHYSICIAN: No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient. May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, Expectorants, and Antitussives may be of help. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed for 24-48 hours for signs of respiratory distress.

SECTION 5 - FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Carbon Dioxide, Dry Chemical, or Alcohol Foam are preferred. Water is not recommended but may be applied in large amounts as a fine spray if other extinguishing media are not available.

Unsuitable Extinguishing Media: Do not use direct water stream as it may spread fire. Product reacts with water. Reaction may be violent, producing heat and gases.

Specific Hazards: During a fire dense smoke will be produced containing the original material as well as unidentified toxic or irritating compounds. Hazardous combustion products may include, but are not limited to, nitrogen oxides, isocyanates, hydrogen cyanide, carbon monoxide, and carbon dioxide. Sealed container may rupture from gases generated in a fire situation. Spills of these organic liquids on hot fibrous insulations may lead to lowering of the auto-ignition temperatures. This may result in spontaneous combustion.

Protective Equipment / Precautions for Fire-fighters: Fire-fighters should wear full protective fire-fighting gear including a full face piece, positive-pressure self-contained breathing apparatus (SCBA). Avoid contact with this material during fire-fighting operations. Consider fighting fire from a remote location with unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from area if you hear rising sound from a venting safety device or the container discolors.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions / Protective Equipment: Always clear area and use protective equipment before attempting to stop spill. Wear suitable chemical resistant clothing including foot protection. Always wear eye protection and gloves when handling this product.

Emergency Procedures: Avoid any contact. Barricade area. Clear non-emergency personnel from area. Keep upwind of spill. Ventilate area of leak or spill. The area must be evacuated and reentered by persons equipped for decontamination.

Containment and Cleanup: Contain liquid to prevent contamination of soil, surface water or ground water. Keep out of ditches, sewers, and water supplies. Should the product enter sewers or drains, it should be pumped into an open vessel. Emergency services may need to be called to assist in the cleanup operation.

Supplies of suitable decontaminant should always be kept available. Absorb with material such as: sawdust, vermiculite, dirt, sand, clay, cob grit, Milisorb. Avoid materials such as cement powder. Collect material in suitable and properly labeled open containers. Do not place in sealed container. Prolonged contact with water results in a chemical reaction which may result in rupture of the container. Place in: poly lined fiber packs, plastic drums, or properly labeled metal containers. Remove to a well-ventilated area. Clean up floor areas. Attempt to neutralize by decontaminant solution: formulation 1: Sodium Carbonate 5-10%; Liquid Detergent 0.2%; Water to make up to 100%. Or formulation 2: Concentrated ammonia solution 3-8%; Liquid Detergent 0.2%; Water to make up 100%. If ammonia is used, use good ventilation to prevent vapor exposure. If you have any questions on how to neutralize call Guardian Energy Technologies, Inc.

SECTION 7 – HANDLING AND STORAGE

Precautions for Safe Handling: Avoid contact of this product with water at all times during handling and storage. Do not eat, drink, or smoke where this product is used. Keep equipment clean and use disposable containers and tools whenever possible.

Conditions for Safe Storage: Store in a cool, covered, well-ventilated place away from direct sunlight. Keep container tightly closed and store locked up. Do not expose to moisture. Do not expose to excessive heat. Do not allow to freeze. Ideal storage temperatures are 65°-90°F (18°-32°C). Keep out of reach of children.

Incompatibilities: Reacts with water.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

PEL/TLV:

Methylene bisphenyl isocyanate (MDI)
 OSHA PEL: 0.02 ppm
 ACGIH TLV: 0.005 ppm
 1,1,1,2-Tetrafluoroethane
 WEEL TWA: 1000 ppm (4240 mg/m³)

Engineering Controls: Use only with adequate ventilation. Provide exhaust ventilation to control airborne concentrations. Exhaust systems should be designed to move the air away from workers and the work area. Odor is an inadequate warning of excessive exposure.

Protective Equipment: Wear chemical goggles and protective clothing impervious to this material including gloves, face shield, boots, apron, or full-body suit. If concentration levels exceed exposure limits, use a NIOSH approved air-purifying respirator equipped with an organic vapor cartridge and particle filter. Employers are required to implement a cartridge change-out schedule for such respirators. If concentration levels are unknown or extremely high use a positive-pressure self-contained breathing apparatus.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Brown liquid	LFL/UFL:	Not Applicable.
Odor:	Slightly musty	Vapor Pressure:	<1 x 10 ⁻⁵ mmHg @ 25°C (77°F)
Odor Threshold:	Well above the exposure limits.	Vapor Density:	8.5 (air = 1)
pH:	No Data.	Relative Density:	1.24 @ 20°C
Melting Point:	No Data.	Solubility:	Reacts with water.
Freezing Point:	No Data.	Partition Coefficient:	No Data
Boiling Point:	410°F (210°C) @ 5 mmHg	Auto-Ignition Temp.:	>1100°F (600°C)
Flash Point:	>400°F (204°C)	Viscosity:	No Data
Evaporation Rate:	No Data.		

SECTION 10 – STABILITY AND REACTIVITY

Reactivity/Chemical Stability: Stable under recommended storage conditions. Will react with water.

Hazardous Reactions: Material reacts slowly with water releasing carbon dioxide. This reaction can cause pressure to build and closed containers to rupture. Elevated temperatures accelerate this reaction.

Conditions to Avoid: Heat, flames, welding arcs, and atmospheric moisture.

Incompatible Materials: Acids, alcohols, water, amines, ammonia, bases, and strong oxidizers. Avoid contact with metals such as: aluminum, zinc, brass, copper, galvanized metals, and tin.

Hazardous Decomposition Products: Hazardous decomposition products vary depending upon temperature, air supply, and presence of other materials. Gases, such as, carbon monoxide and carbon dioxide are likely.

SECTION 11 – TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, ingestion, skin, and eye contact.

Toxicity Data:

Oral – LD50 = >10,000 mg/kg
Dermal – LD50 = >2000 mg/kg

Effects and Symptoms:

Immediate: May cause eye and skin irritation. Excessive exposure by inhalation may cause irritation of the eyes, respiratory tract, and lungs. Pulmonary edema may also occur. Tetrafluoroethane vapors may cause drowsiness or dizziness. Excessive exposure can lead to unconsciousness or asphyxiation.

Delayed: Respiratory symptoms may not present for several hours.

Chronic: May cause skin and respiratory sensitization. Skin contact may play a role in respiratory sensitization. Sensitized individuals may have allergic reactions to concentrations below exposure guidelines. Repeated, excessive exposures to MDI aerosols have been shown to cause tissue injury to the upper respiratory tract and lungs in laboratory animals. Decreased lung function has been associated with overexposure to isocyanates.

Carcinogen: Lung tumors have been observed in lab animals in correlation with persistent lung injury caused by repeated, excessive exposures to aerosols. Such exposures are unlikely to occur in actual working environments.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity: Based on information for MDI and polymeric MDI. The ecotoxicity measurement is that of the hydrolyzed product generally under conditions maximizing production of soluble species. Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100mg/L in the most sensitive species). The LC50 for earthworm *eisenia foetida* is >1000 mg/kg.

Persistence and Degradability: In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polymers which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.

Bioaccumulative Potential: No Data.

Mobility in Soil: Movement is expected to be limited by the product's reactivity with water, forming predominantly insoluble polymers.

Other Adverse Effects: None Known.

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste, Residue, or Chemical: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. The preferred option for disposal is sending waste to a licensed and permitted recycler, reclaimer, incinerator, or other thermal destruction device. All disposal methods must be in compliance with local, state, national, and international regulations. Compliance with these regulations is the sole responsibility of the waste generator. GUARDIAN ENERGY TECHNOLOGIES, INC. HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION.

Container: Containers may contain residue and should be treated with the same considerations as the product itself.

SECTION 14 – TRANSPORTATION INFORMATION

Note: The U.S. Department of Transportation requires that any person preparing a hazardous material for shipping, including packing, marking, labeling and preparation of documents must be trained in accordance with 49 CFR Parts 100 – 185. Contact the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration at <http://phmsa.dot.gov/hazmat> at 1-800-467-4922 or email: phmsa.hm-training@dot.gov for information on their CD ROM Training Module for Hazardous Materials Transportation.

DOT (Over the road transportation): UN #: UN3500 Shipping Name: Chemical Under Pressure ,N.O.S.(Nitrogen) Shipping Class: 60 Hazard Class: 2.2 Packing Group: N/A	Bulk Transport (>5000 lbs.): UN #: UN3500 Shipping Name: Chemical Under Pressure, N.O.S. (Nitrogen), RQ (Methylene Diphenyl Diisocyanate) Hazard Class: 2.2 Packing Group: N/A Special Precautions: None known
IMDG (Ocean transportation): UN #: UN3500 Shipping Name: Chemical Under Pressure, N.O.S. (Nitrogen) Shipping Class: 60 Hazard Class: 2.2 Packing Group: N/A Marine Pollutant: No	IATA (Air transportation): UN #: UN3500 Shipping Name: Chemical Under Pressure, N.O.S. (Nitrogen) Shipping Class: 60 Hazard Class: 2.2 Packing Group: N/A Packing Instructions: 218

Note: Additional certifications are required to ship hazardous material by ocean (IMDG) and air (IATA).

SECTION 15 – REGULATORY INFORMATION

(Not meant to be all-inclusive – selected regulations represented)

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown below. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure that its activities comply with federal, state, provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state, provincial, and local laws and regulations.

US Regulations:

SARA 313 Information: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

Chemical Name	CAS #	Concentration
Methylene Bis(Phenylisocyanate) (MDI)	000101-68-8	42-45%
Polymeric Diphenylmethane Diisocyanate	009016-87-9	100%

SARA Hazard Category: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendments and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

- An immediate health hazard
- A delayed health hazard

Toxic Substances Control Act (TSCA):

All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

The CAS numbers for TSCA are:

- CAS# 009016-87-9
- CAS# 000101-68-8

State Right-To-Know: The following product components are cited on certain lists as mentioned.

Chemical Name	CAS #	LIST
Methylene Bis(Phenylisocyanate) (MDI)	000101-68-8	NJ3, NJ2, PA1, PA3
Polymeric Diphenylmethane Diisocyanate	009016-87-9	NJ2

NJ2 = New Jersey Environmental Hazardous Substance (present at greater than or equal to 1.0%).

NJ3 = New Jersey Workplace Hazardous Substance (present at greater than or equal to 1.0%).

PA1 = Pennsylvania Hazardous Substance (present at greater than or equal to 1.0%)

PA3 = Pennsylvania Environmental Hazardous Substance (present at greater than or equal to 1.0%)

OSHA Hazard Communication Standard: This product is a "Hazard Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Comprehensive Environmental Response Compensation and Liability Act (CERCLA, or Superfund): This product contains the following substance(s) listed as "Hazardous Substances: under CERCLA which may require reporting of releases:

Chemical Name	CAS #	Reportable Quantity (lbs.)	% in Product
Methylene bisphenyl isocyanate	000101-68-8	5000	42-45%

Canadian Regulations:

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

- D2A – Respiratory tract sensitizer.
- D2B – Eye or skin irritant.
- D2B – Skin sensitizer.

CPR Statement: This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and this Safety Data Sheet contains all the information required by the CPR.

Hazardous Products Act Information: This product contains the following ingredients which are Controlled Products and/or on the Ingredient Disclosure List (Canadian HPA Section 13 and 14):

Components	CAS #	% by Weight
Methylene Bis(Phenylisocyanate) (MDI)	000101-68-8	42-45%
Polymeric Diphenylmethane Diisocyanate	009016-87-9	90-100%

SECTION 16 – OTHER INFORMATION

NFPA Ratings:

Health	2
Flammability	1
Reactivity	1
SPECIAL HAZARD:	Avoid Water

Other Information: The reaction of polyols and isocyanates generate heat. Contact of the reacting materials with skin or eyes can cause severe burns and may be difficult to remove from the affected areas. In addition, such contact increases the risk of isocyanate vapors.

Date of Preparation/Last Revision: March 15, 2020
Prepared by: Guardian Energy Technologies, Inc.

WHILE THE INFORMATION AND RECOMMENDATIONS SET FORTH HEREIN ARE BELIEVED TO BE ACCURATE AS OF THE DATE HEREOF, GUARDIAN ENERGY TECHNOLOGIES INC. MAKES NO WARRANTY WITH RESPECT THERETO AND DISCLAIMS ANY LIABILITY FROM RELIANCE THEREON.

SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Guardian Energy Technologies, Inc.
2033 Milwaukee Ave #136
Riverwoods, IL 60015 USA
1-800-519-0949

Emergency Phone Number (Chemtrec): 1-800-424-9300 (#217866)
Outside of U.S.A., call collect: 001-703-527-3887

Product Identifier: Foam It Green Spray Foam Insulation Kits | Component B

Other Means of Identification: Polyether Polyol Blend

Recommended Use: Component in polyurethane foam systems.

SECTION 2 – HAZARDS IDENTIFICATION

OSHA/GHS Classification:

Compressed Gas
Skin Irritant Category 2
Skin Irritant Category 2B
Specific Target Organ Toxicity – Single Exposure Category 3

Label Elements:

Signal Word: DANGER

Pictogram(s):



Hazard Statement(s):

H280: Contains gas under pressure; may explode if heated
H315: Causes skin irritation.
H320: Causes eye irritation.
H335: May cause respiratory irritation.
H360: May damage fertility of the unborn child if ingested.

Precautionary Statement(s):

P102: Keep out of reach of children.
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P251: Pressurized container: Do not pierce or burn, even after use.
P261: Avoid breathing vapor, mist, or spray.
P264: Wash hands thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P281: Wear protective gloves/protective clothing/eye protection/ face protection.
P285: In case of inadequate ventilation: wear respiratory protection.
P302+P352+P332+P313: IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical attention.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical attention.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+P312: If experiencing respiratory symptoms or feel unwell: Call a POISON CENTER or doctor.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P362: Take off contaminated clothing and wash it before reuse.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P405: Store locked up.
P410: Protect from sunlight.
P411: Store at temperatures not exceeding 120°F (48°C).
P412: Do not expose to temperatures exceeding 250°F (121°C).
P501: Dispose of contents/container in accordance with local, state, national, and international regulations.

Hazards Not Otherwise Classified:

Contains substances that can displace oxygen in the air.

SECTION 3 – HAZARDS IDENTIFICATION

Hazardous Components	CAS #	% by Weight
Polyol Blend	Unassigned	40%
Flame Retardant Mixture	Unassigned	20%
Tetrafluoroethane, 1,1,1,2-	811-97-2	15-20%

SECTION 4 – FIRST AID PROCEDURES**Emergency and First Aid Procedures:**

Eyes: Flush eyes with large amounts of water for at least 15 minutes. Get medical attention.

Skin: Wash skin thoroughly with large amounts of water. Consult a physician if irritation develops or persists. Remove contaminated clothing and wash before re-use.

Inhalation: If affected by vapors, remove patient to fresh air and get medical attention. Give oxygen or artificial respiration if necessary. Do not give stimulants. Epinephrine and similar drugs may adversely affect the heart due to a possible risk of eliciting cardiac dysrhythmias.

Ingestion: If swallowed, do not induce vomiting. Get medical attention immediately. The hazard of aspirating material into the lungs is greater than the hazard associated with allowing material to progress through the intestinal tract.

SECTION 5 - FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Foam, alcohol foam, carbon dioxide, dry chemical, or water fog.

Unsuitable Extinguishing Media: Do not use direct water stream as it may spread fire.

Specific Hazards: May emit toxic or irritation fumes if burned. Sealed containers may build pressure if exposed to high temperatures as experienced in a fire. If safe to do, spray containers exposed to fire and heat with water to keep cool.

Protective Equipment / Precautions for Fire-fighters: Fire-fighters should wear full protective clothing to guard against exposure to toxic and irritating fumes as well as a self-contained breathing apparatus (SCBA) with full face piece operated in a positive pressure mode.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions / Protective Equipment: Only properly trained and protected personnel should attend to spills. See Section 8 for information on protective equipment.

Emergency Procedures: Clear non-emergency personnel from area. For large spills, emergency services may need to be contacted.

Containment and Cleanup: Contain and absorb spill with inert absorbent material. Shovel material into properly labeled containers for disposal.

SECTION 7 – HANDLING AND STORAGE

Precautions for Safe Handling: Avoid skin and eye contact. Avoid breathing vapors by providing adequate ventilation or appropriate respiratory protection.

Conditions for Safe Storage: Store in a cool, covered, well-ventilated place away from direct sunlight. Keep container tightly closed and store locked up. Do not expose to moisture. Do not expose to excessive heat. Do not allow to freeze. Ideal storage temperatures are 65°-90°F (18°-32°C). Keep out of reach of children.

Incompatibilities: See section 10.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION**PEL/TLV:**

Tetrafluoroethane –
TWA = 1000 ppm

Engineering Controls: Mechanical or local exhaust is required to keep airborne concentrations at safe levels. Exhaust systems should be monitored regularly in case of obstruction.

Protective Equipment: Wear chemical resistant gloves and clothing, including a face shield, to prevent skin contact. Wear safety glasses or splash goggles to prevent eye contact. Do not wear contact lenses.

Protective Equipment: Wear chemical goggles and protective clothing impervious to this material including gloves, face shield, boots, apron, or full-body suit. If concentration levels exceed exposure limits, use a NIOSH approved air-purifying respirator equipped with an organic vapor cartridge and particle filter. Employers are required to implement a cartridge change-out schedule for such respirators. If concentration levels are unknown or extremely high use a positive-pressure self-contained breathing apparatus.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear to Dark Amber liquid.
Odor: Faint ethereal odor.

LFL/UFL: No Data
Vapor Pressure: <25 psia @ 25°C (77°F)

Odor Threshold:	No Data.	Vapor Density:	Heavier than air
pH:	No Data.	Relative Density:	1.16 @ 25°C (77°F)
Melting Point:	No Data.	Solubility:	Negligibly soluble in water (<0.1%)
Freezing Point:	No Data.	Partition Coefficient:	No Data
Boiling Point:	No Data.	Auto-ignition Temp.:	No Data
Flash Point:	>300°F (149°C)	Viscosity:	No Data
Evaporation Rate:	Faster than n-butyl acetate.		

SECTION 10 – STABILITY AND REACTIVITY

Reactivity/Chemical Stability: Stable under normal handling and storage conditions. Polyols react with isocyanates generating heat and gases. If product is contaminated pressure may build to hazardous levels in sealed containers.

Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Open flames, welding arcs, and other high temperature source can induce thermal decomposition.

Incompatible Materials: Avoid long storage in aluminum, other alkali or alkaline earth metals, or their alloys.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, hydrogen chloride and/or hydrogen fluoride, traces of phosphorous oxides, and traces of carbonyl halides such as phosgene.

SECTION 11 – TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, ingestion, skin, and eye contact.

Toxicity Data:

Oral – LD50 (Estimated) = >2400 mg/kg

Dermal – LD50 (Estimated) = >2300 mg/kg

Effects and Symptoms:

Immediate: Liquid contact can cause eye damage. Vapors may be irritating to eyes. Skin contact may cause irritation. Excessive inhalation of Tetrafluoroethane vapors can cause respiratory irritation, dizziness, and drowsiness. They may even cause unconsciousness or asphyxiation.

Delayed: If not properly cared for areas of skin exposure may develop serious irritation and drying.

Chronic: Ingestion may be damaging to fertility and the unborn child. Consult a physician if exposed. . Overexposure to Tetrafluoroethane can cause cardiac sensitization to epinephrine.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity: No Data.

Persistence and Degradability: No Data.

Bio accumulative Potential: No Data.

Mobility in Soil: No Data.

Other Adverse Effects: This product contains a substance that may be toxic to fish and aquatic organisms.

Note: While there is no data on the ecotoxicity of this product it is always best practice, when handling any chemical, to prevent it from entering drains, sewers, soil, or any bodies of water.

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste, Residue, or Chemical: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. The preferred option for disposal is sending waste to a licensed and permitted recycler, reclaimer, incinerator, or other thermal destruction device. All disposal methods must be in compliance with local, state, national, and international regulations. Compliance with these regulations is the sole responsibility of the waste generator. GUARDIAN ENERGY TECHNOLOGIES, INC. HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION.

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DOT (Over the road transportation):	Bulk Transport (>5000 lbs.):
UN #: UN3500	UN #: UN3500
Shipping Name: Chemical Under Pressure ,N.O.S.(Nitrogen)	Shipping Name: Chemical Under Pressure, N.O.S. (Nitrogen), RQ (Methylene Diphenyl Diisocyanate)
Shipping Class: 60	
Hazard Class: 2.2	

Packing Group: N/A	Hazard Class: 2.2 Packing Group: N/A Special Precautions: None known
IMDG (Ocean transportation): UN #: UN3500 Shipping Name: Chemical Under Pressure, N.O.S. (Nitrogen) Shipping Class: 60 Hazard Class: 2.2 Packing Group: N/A Marine Pollutant: No	IATA (Air transportation): UN #: UN3500 Shipping Name: Chemical Under Pressure, N.O.S. (Nitrogen) Shipping Class: 60 Hazard Class: 2.2 Packing Group: N/A Packing Instructions: 218

Note: Additional certifications are required to ship hazardous material by ocean (IMDG) and air (IATA).

SECTION 15 – REGULATORY INFORMATION

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US Regulations:

SARA Hazard Category: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1984 (SARA Title III) and is considered, under applicable definitions, to meet the following categories

An immediate health hazard

A delayed health hazard

TSCA (Toxic Substances Control Act): Regulations 40 CFR 710 – All ingredients are on the TSCA Section 8 (b) Inventory.

Canadian Regulations:

The Workplace Hazardous Materials Information System (WHMIS) Classifications for this product are:

D1B

D2A

D2B

SECTION 16 – OTHER INFORMATION

Other Information: The reaction of polyols and isocyanates generate heat. Contact of the reaction materials with skin or eyes can cause severe burns and may be difficult to remove from the affected areas. Immediately wash the affected areas with plenty of water and seek medical assistance. This product includes pesticide solely for antimicrobial protection of the cured foam itself.

Date of Preparation/Last Revision: March 15, 2020

Prepared by: Guardian Energy Technologies, Inc

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