

SAFETY DATA SHEET

May be used to comply with OSHA Hazcom 29 CFR 1910.1200. Standards must be consulted for specific requirements.

Revision Date: 2025-06-24

1. IDENTIFICATION

Product Name: VPI Flex Shield
Identified use: 04601G
Company Identification: VPI Corporation
3123 South 9th Street
Sheboygan, WI 53082
(920) 458-4664
www.vpicorp.com

Emergency telephone number

United States: Chemtrec (800) 424-9300 24 hour

2. HAZARDS IDENTIFICATION Hazard classification

The mixture is non-hazardous under the criteria of the Federal OSHA Hazcom 29 CFR 1910.1200.

Label elements

The mixture is non-hazardous under the criteria of the Federal OSHA Hazcom 29 CFR 1910.1200.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component(s)	CAS No.	Concentration
Diethylene glycol monoethyl ether	111-90-0	5 - 25%

4. FIRST AID MEASURES Description of first aid measures

General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact In case of contact, immediately flush with plenty of water. If irritation occurs and persists, get medical attention.

Eye Contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

Ingestion Rinse mouth. If you feel unwell, get medical attention.

Most important symptoms and effects, both acute and delayed

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES Extinguishing media

Suitable Extinguishing Media To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam. Unsuitable Extinguishing Methods None known

Special hazards arising from the substance or mixture

Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds. Combustion products may include and are not limited to: Carbon dioxide. Carbon monoxide.

Unusual Fire and Explosion Hazards: This material will not burn until the water has evaporated. Residue can burn.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Contain fire water run-off if possible.

Special protective equipment for firefighters: Wear self-contained breathing apparatus and protective suit. If protective equipment is not available or not used, fight fire from a protected location or safe distance.

6. ACCIDENTAL RELEASE MEASURES Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Keep people away from and upwind of spill/leak. Material can create slippery conditions.

Environmental precautions

CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

Methods and materials for containment and cleaning up

Contain spills immediately with inert materials (e.g., sand, earth). Transfer liquids and solid diking material to separate suitable containers for recovery or disposal.

7. HANDLING AND STORAGE Precautions for safe handling

Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container tightly closed. Do not breathe vapors, mist or gas.

Conditions for safe storage, including any incompatibilities

Keep from freezing - product stability may be affected. STIR WELL BEFORE USE.

Storage stability

Storage temperature: 1°C - 38°C (34°F - 100°F)

Other data: Monomer vapors can be evolved when material is heated during processing operations. See SECTION 8, for types of ventilation required.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Components	CAS No.	Regulation	Type of listing	Value/Notation
Diethylene Glycol Monoethyl Ether	111-90-0	US WEELs	TWA	25 ppm

Exposure controls

Technical Control: Use local exhaust, or other technology solutions to keep air levels below given or recommended limit values. If limit values are not present, good general ventilation should be sufficient. Local exhaustion may be required in some operations.

Individual protection measures

Eye/Face Protection

Use chemical safety goggles.

Skin Protection

Hand Protection

No precautions other than clean body covering clothing should be needed. Chemical protective gloves is not needed when handling this material. Consistent with general hygienic practice for any material, skin contact should be minimized.

In case of using gloves, use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Neoprene. Nitrile/ butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Avoid gloves made of: Polyvinyl alcohol ("PVA").

Respiratory Protection

Respiratory protection should be worn as there is a risk of exposure above given or recommended Occupational Exposure Limits. If such limit values are not present, respiratory protection will cause effects such as respiratory irritation or discomfort, or when risk assessment indicates that this is required. Under most conditions, no respiratory protection should be required; If discomfort is experienced, use an approved respiratory protective device.

Hygiene measures

Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES Information on basic physical and chemical properties

Appearance:	Liquid.
Color:	Opaque, tan liquid.
Odor:	Wax or ammonia odor.
Odor Threshold:	No data available
pH:	8.0 - 9.0
Melting Point:	No data available.
Boiling Point:	>200°F (93.3°C)
Flash Point:	No data available
Evaporation rate:	No data available
Flammability:	Not Applicable
Upper flammability or explosive limits:	Not Applicable
Lower flammability or explosive limits:	Not Applicable
Vapor Pressure (mm Hg):	No data available
Vapor Density (air=1):	No data available
Relative Density:	8.6 lbs./gal at 20°C
Specific Gravity (H ₂ O = 1) :	> 1.0
Water Solubility:	Dilutable
Partition coefficient:	No data available
Auto-ignition temperature:	Not Applicable
Decomposition temperature:	No data available
Viscosity:	3.3 cps
Explosive properties:	No data available
Oxidizing properties:	No data available

Other information

VOC 0%*

*Per Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5, Article 2, Section 94508.

10. STABILITY AND REACTIVITY

Reactivity: No dangerous reaction known under conditions of normal use.

Chemical stability: Stable product at normal conditions.

Possibility of hazardous reactions: Hazardous polymerization will not occur.

Conditions to avoid: Temperatures above 100°F (38°C) and below 34°F (1°C)

Incompatible materials: Strong oxidizing agents. Strong acids.

Hazardous decomposition products: Thermal decomposition may yield acrylic monomers.

11. TOXICOLOGICAL INFORMATION Information on toxicological effects Acute Toxicity

Acute oral toxicity	Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. Based on information for component(s): LD50, Rat, > 5,000 mg/kg Estimated.
Acute dermal toxicity	Prolonged skin contact is unlikely to result in absorption of harmful amounts. Based on information for component(s): LD50, Rabbit, > 5,000 mg/kg Estimated.
Acute inhalation toxicity	Brief (minutes) exposure to vapor, mist or dust is not likely to cause adverse effects. The LC50 has not been determined.

Skin corrosion/irritation

Brief contact may cause skin irritation with local redness.

Serious eye damage/eye irritation

May cause eye irritation. May cause corneal injury.

Sensitization

For the component(s) tested: Did not demonstrate the potential for contact allergy in mice.

For respiratory sensitization: No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Carcinogenicity

For the component(s) tested: Did not cause cancer in laboratory animals.

Teratogenicity

Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive toxicity

For the component(s) tested: In animal studies, did not interfere with reproduction.

Mutagenicity

In vitro genetic toxicity studies were negative for component(s) tested. Genetic toxicity studies in animals were negative for component(s) tested.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

COMPONENTS INFLUENCING TOXICOLOGY:

Diethylene glycol monoethyl ether (CAS No.: 111-90-0)

Acute oral toxicity

LD50, Mouse, 6,031 mg/kg

Acute dermal toxicity

LD50, Rabbit, 9,143 mg/kg

Acute inhalation toxicity

LC50, Rat, 8 hours, vapor, 0.025 mg/L

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity

Ingredients	Acute toxicity to fish	Acute toxicity to aquatic invertebrates	Acute toxicity to algae/aquatic plants
Diethylene glycol monoethyl ether (CAS No.: 111-90-0)	LC50, Ictalurus catus (catfish), flow-through test, 96 Hour, 6,010 mg/l, OECD Test Guideline 203 or Equivalent.	LC50, Daphnia magna (Water flea), static test, 48 Hour, 1,982 mg/l, OECD Test Guideline 202 or Equivalent	EC50, Desmodesmus subspicatus (green algae), static test, 96 Hour, Growth rate inhibition, > 100 mg/l, OECD Test Guideline 201 or Equivalent

Persistence and degradability

Diethylene glycol monoethyl ether (CAS No.: 111-90-0)

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).

10-day Window: Pass

Biodegradation: 90 % **Exposure time:** 28 d

Method: OECD Test Guideline 301E or Equivalent

10-day Window: Not applicable

Biodegradation: > 90 % **Exposure time:** 5.5 d

Method: OECD Test Guideline 302B or Equivalent

Bioaccumulative potential

Diethylene Glycol Monoethyl Ether (CAS No.: 111-90-0)

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient: n-octanol/water(log Pow): -0.54 Measured

Mobility in soil

Diethylene Glycol Monoethyl Ether (CAS No.: 111-90-0)

Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient(Koc): 20 Estimated.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Product

Coagulate the product by the stepwise of Ferric Chloride and Lime.
Remove the clear supernatant liquid and flush to a chemical sewer.
Incinerate the solids and the contaminated material according to local and federal regulations.

14. TRANSPORT INFORMATION

DOT (Department of Transportation) Not regulated for transport

Classification for SEA transport (IMO-IMDG) Not regulated for transport
Consult IMO regulations before transporting ocean bulk.

Classification for AIR transport (IATA/ICAO) Not regulated for transport

15. REGULATORY INFORMATION Superfund Amendment and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986)

Section 302 and 303 No chemicals in this product are subject to the reporting requirements of Section 302.

Section 304 This product does not contain any components with a section 304 Reportable Quantity (RQ).

Section 311 and 312

No SARA Hazards

Ingredient(s)	CAS No.	Weight %	SARA 311 and 312
Diethylene glycol monoethyl ether	111-90-0	5 - 25%	Fire Hazard

Section 313

Ingredient(s)	CAS No.	Weight %	SARA 313 - Threshold Values %
Diethylene glycol monoethyl ether	111-90-0	5 - 25%	1.0

RIGHT TO KNOW (RTK)

Ingredients	CAS #	MARTK	NJRTK	PARTK
Diethylene glycol monoethyl ether	111-90-0	-	X	X

California Proposition 65

This product contains a chemical that is at or below California Proposition 65's "safe harbor level" as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on SDS or label.

United States TSCA Inventory (TSCA)

All components of this product are in compliance with the inventory listing requirements of the US Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

16. OTHER INFORMATION

HMIS RATING

Health 1, Reactivity 0, Flammability 0, Personal Protection B

NFPA RATING

Special Hazard: N/A, Health: 1, Flammability: 0, Instability: 0

SDS Updated**2025-06-24****Legend**

US WEELs	USA Workplace Environmental Exposure Levels
TWA	Time Weighted Average

Disclaimer

OTHER INFORMATION: This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process. Such information is to the best of the company's knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee of any kind, express or implied, is made as to its accuracy, reliability or completeness and we assume no responsibility for any loss, damage or expense, direct or consequential, arising out of use. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.