



Safety Data Sheet

Monopole, Inc.

Product Name: PERMASHIELD 2K POLYASPARTIC - PART A

Issue Date: February 2025

Monopole Inc. encourages and expects you to read and understand the entire SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

SECTION 1: Identification

Product Name: PERMASHIELD 2K POLYASPARTIC - PART A

Item No. 1400

COMPANY IDENTIFICATION

Monopole, Inc.
4661 Alger Street
Los Angeles, CA 90039
Tel: (818) 500-8585
Fax: (818) 502-0818

EMERGENCY TELEPHONE NUMBERS:

Health Emergency: (818) 500-8585
Poison Center.....: (800) 222-1222
Chemtrec.....: (800) 424-9300

SECTION 2: Hazard Identification

Hazard Classification

Aspiration Hazard - Category 1
Eye Irritation - Category 2A
Respiratory Sensitizer (Solid/Liquid) - Category 1
Skin Sensitizer - Category 1
Germ Cell Mutagenicity - Category 1B
Carcinogenicity - Category 1B
Flammable Liquids Category 3
Acute toxicity, Inhalation - Category 4

Pictograms:



Single Word: Danger

Hazardous Statements: Physical:

H226 - Flammable liquid and vapor

Hazardous Statements: Health:

H332 - Harmful if inhaled
H304 - May be fatal if swallowed and enters airways
H350 - May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)
H319 - Causes serious eye irritation

H340 - May cause genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)
 H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
 H317 - May cause an allergic skin reaction

Precautionary Statements - General:

P101 - If medical advice is needed, have product container or label at hand.
 P102 - Keep out of reach of children.
 P103 - Read label before use. Precautionary Statements - Prevention:
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
 P271 - Use only outdoors or in a well-ventilated area.
 P201 - Obtain special instructions before use.
 P202 - Do not handle until all safety precautions have been read and understood.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P264 - Wash thoroughly after handling.
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P233 - Keep container tightly closed.
 P240 - Ground/bond container and receiving equipment.
 P241 - Use explosion-proof [electrical/ventilating/lighting/...] equipment.
 P242 - Use only non-sparking tools.
 P243 - Take action to prevent static discharges.
 P284 - [In case of inadequate ventilation] wear respiratory protection.
 P272 - Contaminated work clothing should not be allowed out of the workplace.

Precautionary Statements - Response:

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P312 - Call a POISON CENTER/doctor if you feel unwell.
 P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
 P331 - Do NOT induce vomiting.
 P308 + P313 - IF exposed or concerned: Get medical advice/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 advice/attention.
 P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
 P370 + P378 - In case of fire: Check Section-5 (Fire Fighting Measures)
 P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
 P302 + P352 - IF ON SKIN: Wash with plenty of water.
 P333 + P313 - If skin irritation or a rash occurs: Get medical advice/attention.
 P321 - Specific treatment (see section 4 on this SDS).
 P362 + P364 - Take off contaminated clothing. And wash it before reuse.

Precautionary Statements - Storage: P405 - Store locked up.
 P403 + P235 - Store in a well-ventilated place. Keep cool.

Precautionary Statements - Disposal:

P501 - Dispose of contents/ container to an approved waste disposal plant.

SECTION 3: Composition/Information on Ingredients

Hazardous Components	% (by weight)	CAS#	Classification
----------------------	---------------	------	----------------

Hexamethylene Diisocyanate Polymer	30 – 60%	0028182-81-2	
Aliphatic Polyisocyanate	20 – 30%	0093940-97-7	
Hexamethylene Diisocyanate	Trace	0000822-06-0	
Aromatic Hydrocarbon MIXTURE >C9	10-20%	0064742-95-6	

SECTION 4: First Aid Procedures

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.

If exposed/feel unwell/concerned: Call a POISON CENTER/doctor.

Eliminate all ignition sources if safe to do so.

Skin Contact:

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Gently blot or brush away excess product. Wash with plenty of lukewarm, gently flowing water for a duration of 15-20 minutes. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before re-use or discard. IF exposed or concerned: Get medical advice/attention.

Eye Contact:

Avoid direct contact. Wear chemical protective gloves, if necessary.

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 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.

Ingestion:

Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. If vomiting occurs naturally, lie on your side, in the recovery position.

IF exposed or concerned: Get medical advice/attention.

SECTION 5: Fire Fighting Measures

Suitable Extinguishing Media:

Dry chemical, foam, carbon dioxide is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only.

Unsuitable Extinguishing Media:

If water is used, use very large quantities of cold water. The reaction between water and hot isocyanate may be vigorous.

Specific Hazards in Case of Fire:

Vapors may accumulate and travel to ignition sources distant from the handling site; flash fire can occur.

Excessive pressure or temperature may cause explosive rupture of containers.

Water contamination will produce carbon dioxide. Do not reseal contaminated containers as pressure buildup may rupture them.

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. Water may be ineffective but can be used to cool

containers exposed to heat or flame. 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 self-contained breathing apparatus in positive pressure mode with full-face piece.

Boots, gloves (neoprene), goggles, and full protective clothing are also required.

Care should always be exercised in dust/mist areas.

SECTION 6: Accidental Release Measures

Emergency Procedure:

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch or walk through spilled material.

Isolate hazard area and keep unnecessary people away. Remove all possible sources of ignition in the surrounding area. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

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

Recommended Equipment:

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

Personal Precautions:

Avoid breathing vapors. Avoid contact with skin, eyes 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.

Methods and Materials for Containment and Cleaning up:

Cover container, but do not seal, and remove from work area. Prepare a decontamination solution of 2.0% liquid detergent and 3-8% concentrated ammonium hydroxide in water (5-10% sodium carbonate may be substituted for the ammonium hydroxide). Follow the precautions on the supplier's safety data sheets.

Treat the spill area with the decontamination solution, using about 10 parts of the solution for each part of the spill, and allow it to react for at least 15 minutes. Carbon dioxide will be evolved, leaving insoluble polyureas. Residues from spill cleanup, even when treated as described may continue to be regulated under provisions of RCRA and require storage and disposal as hazardous waste.

Slowly stir the isocyanate waste into the decontamination solution described above. Let stand for 48 hours, allowing the evolved carbon dioxide to vent away, residues may still be subject to RCRA storage and disposal requirements. Dispose off in compliance with all relevant local, state, and federal laws and regulations regarding treatment.

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.

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, 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 retain residue and may be dangerous.

Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored.

Ground and bond containers and receiving equipment. Avoid static electricity by grounding.

Do not cut, drill, grind, weld, or perform similar operations on or near containers. Do not pressurize containers to empty them. Ground all structures, transfer containers and equipment to conform to the national electrical code. Use procedures that prevent static electrical sparks. Static electricity may accumulate and create a fire hazard.

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 over-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. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

Depending on conditions of use, additional protection may be required such as apron, arm covers, or full body suit. Wash contaminated clothing before re-wearing.

Respiratory Protection:

If airborne concentrations exceed or are expected to exceed the TLV, use MSHA/NIOSH approved positive pressure supplied air respiratory with a full face piece or an air supplied hood. For emergencies, use a positive pressure self-contained breathing apparatus. Air purifying (cartridge type) respirators are not approved for protection against isocyanates.

Chemical Name	OSHA TWA (ppm)	OSHA TWA (mg/m ³) (ppm)	OSHA Tables - Z1,2,3	NIOSH TWA (ppm)	NIOSH TWA (mg/m ³) (ppm)	ACGIH TWA (ppm)	ACGIH TWA (mg/m ³)
Aromatic Hydrocarbon	500	2000	1				
Hexamethylene Diisocyanate				0.005	0.035		
Aromatic Hydrocarbon							
Hexamethylene Diisocyanate						0.005	0.034

SECTION 9: Physical and Chemical Properties

Specific Gravity: 1.07
 Density: 8.95 lb/gal
 VOC Part A & Part B Combined: 99.45 g/L

VOC Part A & Part B Combined:	0.83 lb/gal
Appearance:	Clear Liquid
Odor:	Mild, Aromatic
Water Solubility:	Reacts with Water
Flash Point:	52°C
Vapor Density:	Heavier than air
Low Boiling Point:	139°C
Evaporation Rate:	Slower than ether

SECTION 10: Stability and Reactivity

Stability:

Material is stable at standard temperature and pressure.

Conditions to Avoid:

Heat, high temperature, open flame, sparks, and moisture. Contact with incompatible materials in a closed system will cause liberation of carbon dioxide and buildup of pressure.

Hazardous Reactions/Polymerization:

Will not occur under normal conditions but under high temperatures in the presence of alkalis, tertiary amines, and metal compounds will accelerate polymerization. Possible evolution of carbon dioxide gas may rupture closed containers.

Incompatible Materials:

This product will react with any material containing active hydrogens, such as water, alcohol, ammonia, amines, alkalis and acids, the reaction with water is slow under 50°C, but is accelerated at higher temperature and in the presence of alkalis, tertiary amines, and metal compounds. Some reactions can be violent. Material can react with strong oxidizing agents

Hazardous Decomposition Products:

Carbon dioxide, carbon monoxide, nitrogen oxides, trace amounts of hydrogen cyanide and unidentified organic compounds may be formed during combustion.

SECTION 11: Toxicological Information

Skin Corrosion/Irritation:

Isocyanates react with skin protein and moisture and can cause irritation. Prolonged contact can cause reddening, swelling, rash, scaling, blistering, and, in some cases, skin sensitization. Individuals who have developed a skin sensitization can develop these symptoms as a result of contact with very small amounts of liquid material or as a result of exposure to vapor.

Serious Eye Damage/Irritation:

Liquid, aerosols or vapors are severely irritating and can cause pain, tearing, reddening and swelling. Prolonged vapor contact may cause conjunctivitis. Any level of contact should not be left untreated.

Causes serious eye irritation

Carcinogenicity:

May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) Respiratory/Skin Sensitization:

May cause allergy or asthma symptoms or breathing difficulties if inhaled

May cause an allergic skin reaction

Germ Cell Mutagenicity:

May cause genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) Reproductive Toxicity:

No data available

Specific Target Organ Toxicity - Single Exposure: No data available

Specific Target Organ Toxicity - Repeated Exposure: No data available

Aspiration Hazard:
May be fatal if swallowed and enters airways
Acute Toxicity:
No data available

0000822-06-0 HEXAMETHYLENE DIISOCYANATE
LC50 (rat): 310-350 mg/m³ (45-51 ppm) (4-hour exposure) (1,2)
LC50 (rat): 274 mg/m³ (40 ppm) (1-hour exposure); 137 mg/m³ (20 ppm) (equivalent 4-hour exposure) (2)
LC50 (mouse): 30 mg/m³ (4.4 ppm) (2-hour exposure); 21.2 mg/m³ (3.1 ppm) (equivalent 4-
LD50 (oral, rat): 710 mg/kg (1); 738 mg/kg (2); 960 mg/kg (2) LD50 (oral, mouse): 350 mg/kg; 1980 mg/kg (2)
LD50 (dermal, rabbit): 570 mg/kg (1); 593 mg/kg (2)

Potential Health Effects - Miscellaneous

0028182-81-2 HEXAMETHYLENE DIISOCYANATE POLYMER

Overexposure may cause asthma-like reactions with shortness of breath, wheezing, cough, which may be permanent; or permanent lung sensitization. This effect may be delayed for several hours after exposure. The following medical conditions may be aggravated by exposure: asthma, skin disorders, respiratory disorders. Potential skin sensitizer that may cause allergic reactions and contact dermatitis resulting in severe irritation, dryness, and cracking of the skin. Skin or eye contact may cause any of the following: irritation.

0064742-95-6 AROMATIC HYDROCARBON MIXTURE >C9

The following medical conditions may be aggravated by exposure: skin disorders. Laboratory studies with rats have shown that petroleum distillates can cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guinea pigs, dogs, or monkeys. Several studies evaluating petroleum workers have not shown a significant increase of kidney damage or an increase in kidney or liver tumors.

SECTION 12: Ecological Information

No information available.

SECTION 13: Disposal Information

Waste Disposal:

Under RCRA, it is the responsibility of the user of the product, to determine a 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.

SECTION 14: Transportation Information

U.S. DOT Information: Not Regulated

IMDG Information:

UN/NA #: 1263 Shipping Name: PAINT

Hazard Class: 3 Packing Group: III Placard: Flammable

Marine Pollutant: No data available

IATA Information:

UN/NA #: 1263 Shipping Name: PAINT

Hazard Class: 3 Packing Group: III Placard: Flammable

SECTION 15: Regulatory Information

Chemical Name	CAS NO.	% by Weight	Regulation
Aromatic Hydrocarbon	0064742-95-6	10-20%	CERCLA,HAPS,SARA312,SARA313,VHAPS,VOC,TSCA
Hexamethylene Diisocyanate Polymer	0028182-81-2	30-60%	SARA312,TSCA
Hexamethylene Diisocyanate	0000822-06-0	0.1%	SARA312,VOC,TSCA

SECTION 16: Other Information

USER'S RESPONSIBILITY: A bulletin such as this cannot be expected to cover all possible individual situations. As the user has the responsibility to provide a safe workplace, all aspects of an individual operation should be examined to determine if, or where, precautions, in addition to those described herein, are required. Any health hazard and safety information herein should be passed on to your customers or employees, as the case may be.

DISCLAIMER: To the best of our knowledge, the information contained herein is accurate, but no representation, guarantee or warranty, expressed or implied, is made as to the accuracy, reliability or completeness of the information. All chemicals may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Monopole Inc. urges persons receiving this information to make their own determination as to the information's suitability and completeness for their particular application. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.



Safety Data Sheet

Monopole, Inc.

Product Name: PERMASHIELD 2K POLYASPARTIC - PART B

Issue Date: February 2025

Monopole Inc. encourages and expects you to read and understand the entire SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

SECTION 1: Product and Company Identification

Product Name: PERMASHIELD 2K POLYASPARTIC - PART B

COMPANY IDENTIFICATION

Monopole, Inc.
4661 Alger Street
Los Angeles, CA 90039
Tel: (818) 500-8585
Fax: (818) 502-0818

EMERGENCY TELEPHONE NUMBERS:

Health emergency : (818) 500 - 8585
Poison center : (818) 356 - 3129
Chemtrec : (800) 424 - 9300

SECTION 2: Hazard Identification

Classification:

Skin Sensitizer - Category 1

Chronic aquatic toxicity - Category 3

Pictograms:



Single word: Danger

Hazardous Statements - Health:

H317 - May cause an allergic skin reaction

Hazardous Statements - Environmental:

H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements - General:

P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

P103 - Read label before use.

Precautionary Statements - Prevention:

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.

P272 - Contaminated work clothing should not be allowed out of the workplace.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P273 - Avoid release to the environment.

Precautionary Statements - Response:

P302 + P352 - IF ON SKIN: Wash with plenty of water.

P333 + P313 - If skin irritation or a rash occurs: Get medical advice/attention.

P321 - Specific treatment (see section 4 on this SDS).

P362 + P364 - Take off contaminated clothing. And wash it before reuse.

Precautionary Statements - Storage: No precautionary statement available.

Precautionary Statements - Disposal:

P501 - Dispose of contents/ container to an approved waste disposal plant.

SECTION 3: Composition/Information on Ingredients
--

Hazardous Components	% (by weight)	CAS#	Classification
Aspartic Acid, N.N;-(Methylenedi-4, 1-Cyclohexanediyl(Bis-, 1,1',4, 4'-Tetraethyl Ester	35-98%	0136210-30-5	
Silica, Crystalline	0.1 % - 1%	0014808-60-7	
4-Methyl-1,3-Dioxolan-2-One	0.1 % - 0.5%	0000108-32-7	

SECTION 4: First Aid Measures

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.

If exposed/feel unwell/concerned: Call a POISON CENTER/doctor.

Skin Contact:

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Gently blot or brush away excess product. Wash with plenty of lukewarm, gently flowing water for a duration of 15-20 minutes. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before re-use or discard.

IF exposed or concerned: Get medical advice/attention.

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.

Ingestion:

Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. If vomiting occurs naturally, lie on your side, in the recovery position.

Give 1 or 2 glasses of milk or water to drink and refer person to medical personnel. Do not give anything by mouth to an unconscious person.

IF exposed or concerned: Get medical advice/attention

SECTION 5: Fire Fighting Measures

Suitable Extinguishing Media:

Dry chemical, foam, carbon dioxide water spray or fog is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only.

Specific Hazards in Case of Fire:

Sudden reaction and fire may result when the product is exposed to oxidizing agents.

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. Water may be ineffective but can be used to cool containers exposed to heat or flame. 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 self-contained breathing apparatus in positive pressure mode with full-face piece. Boots, gloves (neoprene), goggles, and full protective clothing are also required.

Care should always be exercised in dust/mist areas.

SECTION 6: Accidental Release Measure

Emergency Procedure:

Keep unnecessary people away; isolate hazard area and deny entry. Do not touch or walk through spilled material. Clean up immediately.

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

Recommended Equipment:

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

Personal Precautions:

Avoid breathing vapors. Avoid contact with skin, eyes 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.

Methods and Materials for Containment and Cleaning up:

Soak up material with absorbent and shovel into a chemical waste container. Cover container, but do not seal, and remove from work area. Residues from spill cleanup may continue to be regulated under provisions of RCRA and require storage and disposal as hazardous waste. For major spills, call CHEMTREC (Chemical Transportation Emergency Center) at 800-424-9300.

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:

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, 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 retain residue and may be dangerous.

Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored.

Store in tightly sealed containers to protect from atmospheric moisture. Store in a cool dry area. Store liquid in containers above ground and surround by dikes to contain spills or leaks.

Ground and bond containers and receiving equipment. Avoid static electricity by grounding.

SECTION 8: Exposure Controls and 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 over-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. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

Respiratory Protection:

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers.

When airborne concentrations exceed or are expected to exceed the TLV, use MSHA/NIOSH approved positive pressure supplied air respirator with a full-face piece or an air supplied hood. For emergencies, use a positive pressure self-container breathing apparatus.

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 TWA (ppm)	OSHA TWA (mg/m3) (ppm)	OSHA Tables - Z1,2,3	NIOSH TWA (ppm)	NIOSH TWA (mg/m3) (ppm)	NOISH Carcinogen	ACGIH TWA (ppm)	ACGIH TWA (mg/m3)
Silica, Crystalline	a	[10 mg/m3 percent SiO2+2 / 250 percent SiO2+5 mppcf]; [30 mg/m3 percent SiO2+2	[1,3]; [3];		0.05e	1		0.025 ®

SECTION 9: Physical / Chemical Properties

Specific Gravity:	1.2
Density:	10 lb/gal
VOC Part A & Part B Combined:	99.45 g/L
VOC Part A & Part B Combined:	0.83 lb/gal
Appearance:	Clear Liquid
Odor:	Mild, Aromatic
Water Solubility:	Reacts with Water
Flash Point:	190°F
Vapor Density:	Heavier than air
Low Boiling Point:	550°F
Evaporation Rate:	Slower than ether

SECTION 10: Stability & Reactivity Data

Stability:

Material is stable at standard temperature and pressure. Conditions to Avoid: Heat, high temperature, open flame, and moisture. Avoid contact with incompatible materials.

Hazardous Reactions/Polymerization: Will not occur.

Incompatible Materials:

This product will react with any material containing isocyanate. Some reactions can be violent. Hazardous

Decomposition Products:

Combustion products: organic vapors and thermal decomposition fragments.

SECTION 11: Toxicological Information

Skin Corrosion/Irritation:

Product may be absorbed through skin and cause nausea, headache, and general discomfort. Serious Eye

Damage/Irritation:

Vapors can irritate the eyes. Chemical burns may result due to overexposure. Effects of exposure may be delayed.

Carcinogenicity:

No data available

Respiratory/Skin Sensitization:

Inhalation : Severe overexposure may induce respiratory sensitization with asthma like symptoms. These symptoms may be immediate or delayed up to several hours after exposure. Chronic exposures may result in permanent decreases in lung function.

Skin sensitization may develop after repeated and/or prolonged contact.

May cause an allergic skin reaction

Germ Cell Mutagenicity: No data available

Reproductive Toxicity: No data available

Specific Target Organ Toxicity - Single Exposure: No data available

Specific Target Organ Toxicity - Repeated Exposure: No data available

Aspiration Hazard: No data available

ACUTE Toxicity:

If ingested : In humans, irritation or chemical burns of the mouth, pharynx, esophagus and stomach can develop following ingestion, and injury may be severe and cause death.

Repeated and prolonged exposure at low levels may result in adverse skin and eye effects, liver and kidney disorders.

CHRONIC Exposure

0014808-60-7 SILICA, CRYSTALLINE

Prolonged inhalation of respirable crystalline silica dust can result in lung disease (i.e. silicosis and/or lung cancer). Symptoms include coughing, shortness of breath, wheezing and reduced pulmonary function.

Potential Health Effects –

Miscellaneous 0014808-60-7 SILICA, CRYSTALLINE

Is an IARC, NTP or OSHA carcinogen. Repeated overexposure to crystalline silica may lead to x-ray changes and chronic lung disease. Inhalation of high dust concentrations may cause: breathing difficulties, lung injury. **WARNING:** This chemical is known to the State of California to cause cancer.

SECTION 12: Ecological Information**Toxicity:**

Harmful to aquatic life with long lasting effects

Persistence and Degradability:

No data available.

Bioaccumulative Potential:

No data available.

Mobility in Soil:

No data available.

Other Adverse Effects:

No data available.

SECTION 13: Disposal Considerations

WASTE DISPOSAL METHOD: Waste disposal should be in accordance with existing federal, state and local environmental control laws. Incineration is the preferred method.

EMPTY CONTAINER PRECAUTIONS: Empty containers retaining product residue; observe all precautions for product. Do not heat or cut empty container with electric or gas torch because highly toxic vapors and gases are formed.

Do not reuse without thorough commercial cleaning and reconditioning. If container is to be disposed, ensure all product residues are removed prior to disposal.

SECTION 10: Regulatory Information

DOT PROPER SHIPPING NAME: Not regulated.

IATA PROPER SHIPPING NAME: Not regulated.

IMO PROPER SHIPPING NAME: Not regulated.

OSHA HAZCOM STANDARD RATING – Hazardous

Chemical Name	CAS NO.	% by Weight	Regulation
Aromatic Hydrocarbon	0064742-95-6	10-20%	CERCLA,HAPS,SARA312,SARA313,VHAPS,VOC,TSCA
Hexamethylene Diisocyanate Polymer	0028182-81-2	30-60%	SARA312,TSCA
Hexamethylene Diisocyanate	0000822-06-0	0.1%	SARA312,VOC,TSCA

USER'S RESPONSIBILITY: A bulletin such as this cannot be expected to cover all possible individual situations. As the user has the responsibility to provide a safe workplace, all aspects of an individual operation should be examined to determine if, or where, precautions, in addition to those described herein, are required. Any health hazard and safety information herein should be passed on to your customers or employees, as the case may be.

DISCLAIMER: To the best of our knowledge, the information contained herein is accurate, but no representation, guarantee or warranty, expressed or implied, is made as to the accuracy, reliability or completeness of the information. All chemicals may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Monopole Inc. urges persons receiving this information to make their own determination as to the information's suitability and completeness for their particular application. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.