VPC-ISO

VPC-ISO Isocyanate | ISO Component A

Safety Data Sheet

Section 1: Product and Company Information

Trade Name	VPC-ISO Isocyanate - ISO Component A
Chemical Name	Diphenylmethane Diisocyanate (MDI)
Chemical Family	Aromatic Isocyanate
Product Use	Component of a Polyurethane System

1.2 Name, Address, and Telephone of the Responsible Party

Company, Manufacturer	Victory Polymers Corp. 1700 Post Oak Boulevard 2 BLVD Place, Suite 600 Houston, TX 77056 | U.S.A.
Telephone Number	1-832-240-7222 / International: 001-832-240-7222
Email	info@VictoryPolymers.com
Website	www.VictoryPolymers.com

1.3 Emergency Telephone Number

For Hazardous Materials [or Dangerous Goods] Incident Spill, Leak, Fire, Exposure, or Accident, Call CHEMTREC Day or Night	1-800-424-9300
Outside USA and Canada (collect calls accepted)	+1-703-527-3887 CCN838152

Section 2: Hazards Identification

Physical State	Liquid
Color	Brown
Odor	Slightly musty

2.2 Emergency Overview/Warning

OSHA/HCS Status	This material is classified hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200).
Physical/Chemical Hazards	Toxic vapors may be released during burning or thermal decomposition. Closed container may forcibly rupture under extreme heat or when contents have been contaminated with water. Use cold water spray to cool fire exposed containers to minimize the risk of rupture.
Human Health Hazard	Harmful by inhalation. Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact. This product is respiratory irritant and potential respiratory sensitizer: repeated inhalation of vapor or aerosol at levels above the occupational exposure limit could cause respiratory sensitization. A hyper-reactive response to even minimal concentrations of MDI may develop in sensitized persons. The onset of the respiratory symptoms may be delayed for several hours after exposure. Lung damage and respiratory sensitization may be permanent.

Section 3: Composition/Information on Ingredients

Ingredients	CAS#	%
Polymeric Diphenylmethane Diisocyanate (pMDI)	9016-87-9	50 - 60
4,4' Diphenylmethane Diisocyanate (MDI)	101-68-8	35 - 45
2,4' Diphenylmethane Diisocyanate (MDI)	5873-54-1	1 - 5

Section 4: First-Aid Measures

Eye Contact	Immediately flush eyes with running water for a minimum of 15 minutes. Use lukewarm water if possible. Hold eyelids open during flushing. Obtain medical attention immediately.
Skin Contact	In case of contact, immediately remove contaminated clothing and shoes. Immediately flush skin with soap and water. Use lukewarm water if possible. Wash contaminated clothing and shoes thoroughly before reuse. For severe exposures, immediately get under safety shower and start rinsing. If the irritation develops, obtain medical attention.
Inhalation	Move to an area free from further exposure. Obtain medical attention immediately. If breathing is difficult, qualified personnel should administer artificial respiration or oxygen. Asthmatic symptoms may develop and may be immediate or delayed up to several hours. Extreme asthmatic reactions can be life threatening.
Ingestion	DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If patient is conscious, wash out mouth with water. Get immediate medical attention.
Protection of First-Aiders	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
Notes to Physician	Eyes: Stain for evidence of corneal injury. If cornea is burned, instill antibiotic/steroid preparation as needed. Workplace vapors could produce reversible corneal epithelial edema impairing vision. Skin: this compound is a skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burn. Ingestion: treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of compound. Inhalation: treatment is essentially symptomatic. An individual having a dermal or pulmonary sensitization reaction to this material should be removed from further exposure to any diisocyanate. Following severe exposure, the patient should be kept under medical review for at least 48 hours.

Section 5: Firefighting Measures

Suitable Extinguishing Media	Dry chemical, carbon dioxide (CO_2), foam, water spray for large fires.
Hazardous Products of Thermal Decomposition	Combustion products may include carbon monoxide, carbon dioxide, nitrogen oxides, hydrocarbons, and HCN.
Special Firefighting Procedures	Firefighter should be equipped with self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode to protect against potentially toxic and irritating fumes generated by thermal decomposition or combustion during a fire. They should wear appropriate protective equipment such as PVC boots, gloves, safety helmet, and protective clothing. Avoid contact with product. Exposure to heated diisocyanate can be extremely dangerous. Decontaminate equipment and clothing prior to reuse.
Unusual Fire/Explosion Hazards	A hazardous pressure buildup could result due to reaction with water producing CO_2 gas if contaminated containers are resealed. Containers may burst if overheated. Use cold water spray to cool fire exposed containers to minimize the risk of rupture. Large fires can be extinguished with large volumes of water applied from a safe distance, since reaction between water and hot diisocyanate can be vigorous.

Section 6: Accidental Release Measures

Spill and Leak Procedures	Evacuate all non-emergency personnel. Isolate the area and prevent access. Eliminate all sources of ignition. Notify management. Use protective equipment. Control sources of the leak. Ventilate. Clean-up should be performed by trained personnel.
Methods for Cleaning-up	Environmental Precautions: Contain the spill to prevent spread into drains, sewers, water supplies, or soil. Major Spill or Leak: Released material may be pumped into closed, but not sealed metal containers for disposal. Process can generate heat. People dealing with major spillage should wear full protective clothing including respiratory protection. Use suitable protective equipment. Minor Spill or Leak: Cover spill area with sand, earth or any suitable absorbent material. Saturate absorbent material with neutralization solution and mix. Wait 15 minutes. Collect material in open-head metal containers. Repeat applications of decontamination solution, with scrubbing, followed by absorbent until the surface is decontaminated. Check for residual surface contamination. Swipe® test kits have been used for this purpose. Apply lid loosely and allow containers to vent for 72 hours to let carbon dioxide escape. Wash the spillage area with water. Test atmosphere for MDI vapor.
Neutralization Solutions	a mixture of 75% water, 20% non-ionic surfactant and 5% n-propanol a mixture of 80% water with 20% non-ionic surfactant a mixture of 90% water, 3-8% ammonium hydroxide or concentrated ammonia and 2% detergent

Section 7: Handling and Storage

Storage Temperature	50 - 100°F (10 - 38°C)
Storage Life	12 months
Handling	Do not breathe vapor, mists, or dusts. Avoid contact with skin and eyes. Use adequate ventilation to keep airborne isocyanate levels below the exposure limits. The efficiency of the ventilation system must be monitored regularly because of the possibility of blockage. When the product is sprayed, heated, or used in confined space, suitable respiratory protection equipment with positive air supply is required. Keep equipment clean. This material can produce asthmatic sensitization upon either single inhalation exposure to a relatively high concentration or upon repeated inhalation exposures to lower concentrations. Individuals with lung or breathing problems or prior allergic reactions to isocyanates must not be exposed to vapors and mist. Do not breathe smoke and gases created by overheating or burning this material. Decomposition products can be highly toxic and irritating. Keep stocks of decontaminant readily available. Employee education and training in the safe use and handling of this product are required under the OSHA Hazard Communication Standard 29 CFR 1910.1200.
Storage	Store in tightly closed containers to prevent moisture contamination. Due to reaction with water producing CO_2 gas, a hazardous buildup of pressure could result if contaminated containers are resealed. Do not reseal container if contamination is suspected. Uncontaminated containers, free of moisture, may be resealed only after placing under a nitrogen blanket.
Packaging Containers	Suitable: steel, stainless steel. Unsuitable: copper, copper alloys, or galvanized surfaces.

Section 8: Exposure Control/Personal Protection

Ingredient Name	4,4' Diphenylmethane Diisocyanate

8.2 Occupational Exposure Limits

US. ACGIH Threshold Limit Values: TWA: 0.005 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000): Ceiling Limit Value: 0.02 ppm, 0.2 mg/m^3

US. NIOSH: Pocket Guide to Chemical Hazards: Recommended Exposure Limit REL/TWA: 0.005 ppm, 0.05 mg/m^3 (10 hours, 40 hrs/week)

Ceiling Limit Value and Time Period (if specified): 0.020 ppm, 0.2 mg/m^3 (10 min)

8.3 Environmental Controls

Occupational Exposure Controls	Provide exhaust ventilation or other engineering controls to keep the airborne vapors concentrations below their respective occupational exposure limits. Standard reference sources regarding industrial ventilation (e.g., ACGIH Industrial Ventilation Manual) should be used as a guide about adequate ventilation. To ensure that published exposure limits have not been exceeded, monitoring for airborne diisocyanate should become part of the overall employee exposure characterization program. NIOSH and OSHA have developed sampling and analytical methods and they are available upon request. MDI can only be smelled if the occupational exposure limit has been exceeded considerably.
Environmental Exposure Controls	Emissions from ventilation or work process equipment should be checked to ensure compliance with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters, or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

8.4 Personal Protective Equipment

Eye Protection	Eye protection is required when directly handling liquid product. Safety eye wear such as chemical safety goggles or 8" face shield should be used when there is a greater risk of liquid splash. Contact lenses should not be worn when working with this chemical.
Skin Protection	Avoid all contact with skin. Cover exposed skin area with appropriate clothing to prevent skin contact. Use chemical resistant gloves such as nitrile/butadiene rubber ("nitrile" or "NBR"), butyl rubber, polyvinyl chloride ("PVC" or "vinyl"), polychloroprene (neoprene). Protective gloves should be worn when handling freshly made polyurethane products to avoid contact with trace residual materials that may be hazardous in contact with skin. Wash hands, forearms, and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory, and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Animal tests and other research indicate that skin contact with MDI can play a role in causing isocyanate sensitization and respiratory reaction.
Respiratory Protection	Airborne MDI concentrations greater than the ACGIH TLV-TWA (TWA) or OSHA PEL-C (PEL) can occur in inadequately ventilated environments when MDI is sprayed, aerosolized, or heated. In such cases, respiratory protection must be worn. The type of protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134). The types of available protection include: 1) an atmosphere-supplying respirator such as a self-contained breathing apparatus (SCBA) or a supplied air respirator (SAR) in the positive pressure or continuous flow mode, or 2) an air purifying respirator (APR). If an APR is selected, then: a) cartridge must be equipped with an end-of-service life indicator (ESLI) certified by NIOSH, or (b) a change out of schedule, based on objective information or data that will ensure that the cartridges are changed out before the end of their service life, must be developed and implemented. The basis for the change out of schedule must be described in the written respirator program. Further, if an APR is selected , the airborne diisocyanate concentration must be no greater than 10 times the TLV or PEL. The recommended APR cartridge is an organic vapor/particulate filter combination cartridge (OV/P100).
Medical Surveillance	All applicants assigned to an isocyanate work area should undergo a pre-placement medical evaluation. A history of asthma, bronchitis, eczema, or respiratory allergies such as hay fever, are possible reasons for medical exclusion from isocyanate areas. Once a worker has been diagnosed as sensitized to any isocyanate, no further exposure can be permitted. The Occupational Exposure Limits do not apply to previously sensitized individuals. A comprehensive annual medical surveillance program should be instituted for all employees who are potentially exposed to diisocyanates.
Additional Protective Measures	Ensure that eyewash stations and safety showers are close to the workstation. Educate and train employees in the safe use and handling of this product. Follow all label instructions.

Section 9: Physical and Chemical Properties

Physical State	Brown liquid
Odor	Slightly musty
Viscosity @ 77°F (25°C)	180 - 220 cps
Specific Gravity @ 77°F (25°C)	1.24
Flash Point	> 388°F (198°C) by ASTM D 93
Auto-Ignition Temperature	> 1112°F (600°C)
Boiling Point	-406°F (208°C)
Bulk Density	1.234 kg/m^3
pH	N/A
Vapor Pressure	< 0.0001 mmHg @ 77°F (25°C) (MDI)
Vapor Density (Air=1)	8.5 for MDI
Solubility in Water	Insoluble. Reacts slowly with water to liberate CO_2

Section 10: Stability and Reactivity

Incompatibility	Stable at room temperature. This product will react and release heat with any materials containing active hydrogen. The reaction is accelerated and can be violent at higher temperatures if the miscibility of the reaction partners is good or is supported by stirring or by the presence of solvents. MDI is insoluble with and heavier than water and sinks to the bottom, but reacts slowly at the interface. A solid water-insoluble layer of polyurea is formed at the interface by liberating CO_2.
Conditions/Materials to Avoid	Avoid high temperatures. Avoid water, alcohols, amines, bases, copper alloys.
Hazardous Polymerization	May occur at elevated temperatures (350°F (177°C)), in the presence of alkalies, tertiary amines, and metal compounds.
Hazardous Products of Decomposition	Isocyanate vapors and other irritating , highly toxic gases such as carbon dioxide, carbon monoxide, nitrogen oxides, hydrocarbons, and HCN.

Section 11: Toxicological Information

	Acute Oral Toxicity, LD50 (Rat)	Acute Inhalation Toxicity, LC50 (Rat)	Acute Dermal Toxicity, LD50 (Rabbit)	Repeated Dose Toxicity (Rat)
VPC-ISO A (data based on comparable products)	> 2000 mg/kg	490 mg/m^3 (4 hr)	slightly irritating	90 days, inhalation: NOAEL: 1 mg/m^3 (6 hrs/day, 5 days/week) Irritation to lungs & nasal cavities
4,4′ Diphenylmethane Diisocyanate	N/A	369 mg/m^3 (4 hr) > 2240 mg/m^3 (1 hr)	> 10,000 mg/kg	90 days, inhalation: NOAEL: 0.3 mg/m^3 (18 hrs/day, 5 days/week) Irritation to lungs & nasal cavities

11.2 Potential Acute Health Effects

Eye Contact — Irritating to eyes.

Skin Contact — Irritating to skin. May cause sensitization by skin contact.

Inhalation — Product is a respiratory irritant and potential respiratory sensitizer. Repeated inhalation of vapors or aerosols at levels above the occupational exposure limit could cause respiratory sensitization. Symptoms may include irritation to eyes, nose, throat, and lungs, possibly combined with dryness of the throat, tightness of chest, and difficulty in breathing. The onset of the respiratory symptoms may be delayed for several hours after exposure. A hyper-reactive response to even minimal concentrations of MDI may develop in sensitized persons.

Ingestion — Low oral toxicity. Ingestion may cause irritation of gastrointestinal tract.

11.3 Potential Chronic Health Effects

Target Organs — Lungs, upper respiratory tract, skin.

Carcinogenic Effects — A study was conducted where groups of rats were exposed for 2 years to a respirable polymeric MDI aerosol at concentrations of 0, 0.2, 1, or 6 mg/m^3. No adverse effects were observed at 0.2 mg/m^3. At the 1 mg/m^3, minimal nasal and lung irritant effects were seen. Only at the top concentration (6 mg/m^3) there was an increased incidence of benign tumor of the lung. One malignant pulmonary tumor was seen in the 6 mg/m^3 group. MDI administration to rats in this study did not change the distribution and incidence of tumors from those seen in control animals. The increased incidence of lung tumors is associated with prolonged respiratory irritation and the concurrent accumulation of yellow material in the lung. In the absence of prolonged exposure to high concentrations leading to chronic irritation and lung damage, it is highly unlikely that tumor formation will occur.

Mutagenic Effects — There is no substantial evidence of mutagenic potential.

Reproductive Effects — No adverse reproductive effects are anticipated. No birth defects were seen in two independent animal (rat) studies. Fetotoxicity was observed at doses that were extremely toxic (including lethal) to the mother.
Fetotoxicity was not observed at doses that were not maternally toxic. The doses used in these studies were maximal respirable concentrations well in excess of the defined occupational exposure limits.

Section 12: Ecological Information

12.1 Aquatic Toxicity Data for Components Toxicity

VPC-ISO A (data based on comparable products)
Biodegradation: 0%, not degradable (exposure time 28 days)
Bioaccumulation: does not accumulate (112 days) (rainbow trout)
Acute & Prolonged Toxicity to Fish: LC50: > 1,000 mg/l (96 hrs) (zebra fish)
LC50: > 3,000 mg/l (96 hrs) (orange-red killifish)
Acute & Prolonged Toxicity to Invertebrates: EC50: > 1,000 mg/l (24 hrs) (daphnia magna)
Toxicity to Aquatic Plants: NOEC: 1,640 mg/l (72 hrs) (green algae)
Toxicity to Microorganisms: EC50: > 100 mg/l (3 hrs) (activated sludge)

4,4′ Diphenylmethane Diisocyanate
Acute & Prolonged Toxicity to Fish: LC50: > 500 mg/l (24 hrs) (zebra fish)
Acute & Prolonged Toxicity to Invertebrates: EC50: > 500 mg/l (24 hrs) (daphnia magna)

Mobility — By considering the production and use of substance, it is unlikely that significant environmental exposure in the air or water will arise. Immiscible with water but will react and produce inert and non-biodegradable solids. Conversion to soluble products, including diamino-diphenylmethane (MDA) is very low under the optimal laboratory conditions of good dispersion and low concentration. In air, the predominant degradation process is predicted to be relatively rapid OH attack, by calculation and by analogy with related diisocyanates.

Other Adverse Effects — By comparison with an analogous product, the following values are anticipated. The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species. Even so, the observed ecotoxicity is low/very low. A pond study showed gross contamination caused no significant toxic effects on a wide variety of flora in all tophic levels (including fish), no detectable diamino-diphenylmethane (MDA), and no evidence of bioaccumulation of MDI or MDA.

Section 13: Disposal Consideration

Waste Disposal Method	The generation of waste should be avoided or minimized whenever possible. Waste must be disposed of in compliance with federal, state, provincial, and local environmental control regulations. Dispose of surplus and non-recyclable products via licensed waste disposal contractor. Incineration is the preferred method. If incinerated, toxic and corrosive combustion gases must be properly handled.
Empty Container Precautions	Empty containers retain product residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

Victory Polymers has no control over the management practices or manufacturing processes of parties handling or using this material. The information presented here pertains only to the product as shipped in its original condition as described in SDS Section 3 (Ingredients).

Section 14: Transport Information

Technical Shipping Name	VPC-ISO A
Land Transport/DOT Classification	Non-regulated
RSPA/DOT Regulated Components	4,4' Diphenylmethane Diisocyanate Reportable Quantity (RQ) for 4,4 MDI: Single containers with ≥ 5,000 lbs Reportable Quantity (RQ) for A-PMDI: Single containers with ≥ 11,905 lbs
Additional Transport Information	In individual containers of less than the Reportable Quantity, material ships as non-regulated
Sea Transport/IMDG Classification	Non-regulated
Air Transport/ICAO/IATA Classification	Non-regulated
TDG Classification	Non-regulated
Emergency Telephone Number	CHEMTREC 800-424-9300 or CANUTEC 613-996-6666

Section 15: Regulatory Information

15.1 U.S. Federal Regulations

OSHA Hazcom Standard Rating	This material is classified as hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200)
HSC Classification	Toxic/Irritant/Sensitizer
US. Toxic Substances Control Act/TSCA	All ingredients are listed on the TSCA Inventory
US. EPA CERCLA Hazardous Substances (40 CFR 302)	4,4' Diphenylmethane Diisocyanate (CAS 101-68-8) has a 5,000 lbs RQ. Any spill or release above the RQ must be reported to the National Response Center (800-424-8802).
SARA Section 311/312 Hazard Categories	Acute Health Hazard, Chronic Health Hazard
US. EPA EPCRA SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)	Non-regulated
US. EPA EPCRA SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) – Supplier Notification Required	Components: Polymeric Diphenylmethane Diisocyanate (pMDI): 50 - 60% 4,4' Diphenylmethane Diisocyanate: 35 - 45%
US. EPA RCRA Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261)	If discarded in its purchased form, this product will not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste (40 CFR 261.20-24).
State Regulations	The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the SDS may also be applicable to state requirements. For details on your regulatory requirements, you should contact appropriate agency in your state.
California Prop. 65	No ingredients listed

15.1 U.S. Federal Regulations (continued)

Massachusetts, New Jersey or Pennsylvania Right to Know Substances Lists

Components	CAS#	Weight %
Polymeric Diphenylmethane Diisocyanate (pMDI)	9016-87-9	50 - 60
4,4' Diphenylmethane Diisocyanate (MDI)	101-68-8	35 - 45
2,4' Diphenylmethane Diisocyanate (MDI)	5873-54-1	1 - 5

New Jersey Environmental Hazardous Substances List and/or New Jersey RTK Special Hazardous Substances Lists

Components	CAS#	Weight %
Polymeric Diphenylmethane Diisocyanate (pMDI)	9016-87-9	40 - 55
4,4' Diphenylmethane Diisocyanate (MDI)	101-68-8	35 - 45

15.2 Canada

WHMIS	Class D-1A/Material causing immediate and serious toxic effects (very toxic) Class D-2A/Material causing other toxic effects (very toxic) Class D-2B/Material causing other toxic effects (toxic)
CEPA (DSL)	Canada Inventory: All components are listed or exempted.

Section 16: Other Information

HMIS Rating			NFPA Rating		
Health	**Fire Hazard**	**Reactivity**	**Health Hazard**	**Flammability Hazard**	**Instability Hazard**
2	1	1	2	1	1
0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe			0 - Insignificant; 1 - Slight; 2 - Moderate; 3 - High; 4 - Extreme		

This product does not contain nor is it manufactured with ozone depleting substances.

Notice: The information herein is presented in good faith and believed to be accurate as of the effective date shown below. However, no warranty expressed or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the user's responsibility to ensure that its activities comply with country, state, provincial, and local laws. This product may present hazards and should be used with caution. While certain hazards are described in this publication, no guarantee is made that these are the only hazards that exist. Hazards, toxicity, and behavior of the products may differ when used with other materials and are dependent upon manufacturing circumstances or other processes. Such hazards, toxicity, and behavior should be determined by the user and made known to handlers, processors, and end users.

Prepared By	Victory Polymers Corp.
Current Issue Date	1/1/2020
Revision Date	2/4/2020

Victory Polymers

VPC-HFO

Closed-Cell | Polyol Component B

B RESIN

Safety Data Sheet

Section 1: Product and Company Identification

GHS Product Identifier	VPC-HFO
Chemical Name	Polyurethane Resin/B-side
Product Type	Liquid
Identified Use	Component B of a Spray-Applied Polyurethane System

1.2 Name, Address, and Telephone of the Responsible Party

Company	Victory Polymers Corp. 1700 Post Oak Boulevard 2 BLVD Place, Suite 600 Houston, TX 77056 | U.S.A.
Telephone Number	1-832-240-7222 / International: 001-832-240-7222
Email	info@VictoryPolymers.com
Website	VictoryPolymers.com

1.3 Emergency Telephone Number

For Hazardous Materials [or Dangerous Goods] Incident Spill, Leak, Fire, Exposure, or Accident, Call CHEMTREC Day or Night:	1-800-424-9300
Outside USA and Canada (collect calls accepted):	+1-703-527-3887 CCN838152

Section 2: Hazards Identification

OSHA/HCS Status	This material is classified hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the Substance or Mixture	Serious eye damage/eye irritation – Category 2A

2.2 GHS Label Elements Including Precautionary Statements

Hazard Pictograms

Signal Word	Warning
Hazard Statements	H319 – Causes serious eye irritation.

2.3 Precautionary Statements

Prevention	P280 – Wear eye or face protection. P264 – Wash hands thoroughly after handling.
Response	P350 + P351 + P338 – If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + 313 – If eye irritation persists: Get medical attention.
Storage	Store locked up.
Disposal	Not applicable.

2.4 Hazards Not Otherwise Classified (HNOC)

Physical Hazards Not Otherwise Classified (PHNOC)	None known.
Health Hazards Not Otherwise Classified (HHNOC)	None known.

Section 3: Composition/Information on Ingredients

Substance/Mixture	Mixture
Chemical Name	Polyurethane Resin B-side

3.2 CAS Number/Other Identifiers

CAS Number	Not applicable.
Product Code	Not applicable.

Ingredients	CAS#	%
Trans- 1-chloro-3,3,3- trifluoropropene	102687-65-0	5-10
Tris (2-chloro-1-methylethyl) Phosphate	13674-84-5	5-10
Triethyl Phosphate	78-40-0	1-5
Trans-dichloroethylene	156-60-5	1-5
Ethanediol	107-21-1	1-5
2,2-Oxibisethanol	111-46-6	1-5
N,N,N',N',N'',N''-Hexamethyl-1,3,5-triazine-1,3,5(2H,4H,6H)-tripropanamine	15875-13-5	

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4: First-Aid Measures

4.1 Description of Necessary First-Aid Measures

Eye Contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular, or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Maintain an open airway. Get medical attention if symptoms occur.
Skin Contact	Flush contaminated skin with plenty of water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

4.2 Most Important Symptoms/Effects, Acute and Delayed

Potential Acute Health Effects

Eye Contact	Causes serious eye irritation.
Inhalation	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin Contact	No known significant effects or critical hazards.
Ingestion	Irritating to mouth, throat, and stomach.

Overexposure Signs/Symptoms

Eye Contact	Adverse symptoms may include the following: pain or irritation, watering, redness.
Inhalation	No known significant effects or critical hazards.
Skin Contact	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.

Indication of Immediate Medical Attention and Special Treatment Needed, if Necessary

Notes to Physician	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific Treatments	No specific treatment.
Protection of First-Aiders	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5: Firefighting Measures

Suitable Extinguishing Media	Use dry chemical, CO^2, water spray (fog), or foam.
Unsuitable Extinguishing Media	None known.
Specific Hazards Arising from the Chemical	No specific fire or explosion hazard.
Hazardous Thermal Decomposition Products	Combustion products may include carbon monoxide, carbon dioxide, nitrogen oxides, halogenated compounds, traces of ammonia vapors, phosphoric oxides, aldehydes and ketones, low molecular weight organic products, noxious and toxic fumes.
Special Protective Actions for Firefighters	No special measures are required.
Special Protective Equipment for Firefighters	Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6: Accidental Release Measures

6.1 Personal Precautions, Protective Equipment, and Emergency Procedures

For Non-Emergency Personnel	Put on appropriate personal protective equipment.
For Emergency Responders	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For Non-Emergency Personnel."
Environmental Precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, or air).

6.2 Methods and Materials for Containment and Cleaning Up

Spill	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements, or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material, e.g., sand, earth, vermiculite, or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: See Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7: Handling and Storage

7.1 Precautions for Safe Handling

Storage Temperature	59–77°F (15–25°C)
Storage Life	6 months
Protective Measures	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on General Occupational Hygiene	Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored, and processed. Workers should wash hands and face before eating, drinking, and smoking. See also Section 8 for additional information on hygiene measures.
Conditions for Safe Storage Including any Incompatibilities	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool, and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8: Exposure Control/Personal Protection

8.1 Control Parameters – United States

Occupational Exposure Limits

Ingredient Name	Occupational Exposure Limit Values
1,1,1,3,3-Pentafluoropropane	AIHA WEEL (United States, 10/2011) TWA: 300 ppm 8 hours
Triethyl Phosphate	AIHA WEEL (United States, 10/2011) TWA: 7.45 mg/m³ 8 hours
Trans-dichloroethylene	ACGIH TLV (United States, 4/2014) TWA: 200 ppm 8 hours TWA: 793 mg/m³ 8 hours
Ethanediol ACGIH TLV (United States, 4/2014)	C: 100 mg/m³ Form: Aerosol OSHA PEL 1989 (United States, 3/1989) CEIL: 125 mg/m³ CEIL: 50 ppm
2,2-Oxibisethanol	AIHA WEEL (United States, 5/2010) TWA: 10 mg/m³ 8 hours

8.2 Control Parameters – Canada

Occupational Exposure Limits

		TWA (8 Hours)			STEL (15 Mins)			Ceiling			
Ingredient Name	**List Name**	**ppm**	**mg/m³**	**other**	**ppm**	**mg/m³**	**other**	**ppm**	**mg/m³**	**other**	**notes**
Trans-dichloroethylene	US ACGIH 4/2014	200	793	–	–	–	–	–	–	–	
	AB 4/2009	200	793	–	–	–	–	–	–	–	
	BC 7/2013	200	–	–	–	–	–	–	–	–	
	ON 1/2013	200	793	–	–	–	–	–	–	–	
	QC 1/2014	200	793	–	–	–	–	–	–	–	
1,1,1,3,3-Pentafluoropropane	US AIHA 10/2011	300	–	–	–	–	–	–	–	–	
Ethanediol	US ACGIH 4/2014	–	–	–	–	–	–	–	100	–	(a)
	AB 4/2009	–	–	–	–	–	–	–	100	–	(3) (a)
	BC 7/2013	–	–	–	–	–	–	–	100	–	(a)
		–	10	–	–	20	–	–	–	–	(b)
		–	–	–	–	–	–	50	–	–	(c)
	ON 1/2013	–	–	–	–	–	–	–	100	–	(a)
	QC 1/2014	–	–	–	50	127	–	–	–	–	(d)
2,2-Oxibisethanol	US AIHA 5/2010	–	10	–	–	–	–	–	–	–	
Triethyl Phosphate	US AIHA 10/2011	–	7.45	–	–	–	–	–	–	–	
Glycerol	AB 4/2009	–	10	–	–	–	–	–	–	–	(3) (e)
	BC 7/2013	–	10	–	–	–	–	–	–	–	(e)
		–	3	–	–	–	–	–	–	–	(f)
	ON 1/2013	–	10	–	–	–	–	–	–	–	(g)
	QC 1/2014	–	10	–	–	–	–	–	–	–	(e)

(3) Skin sensitization. Form: (a) Aerosol. (b) Particulate. (c) Vapor. (d) Vapor and Mist. (e) Mist. (f) Respirable Mist. (g) Inhalable Fraction.

Appropriate Engineering Controls Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental Exposure Controls Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

8.3 Individual Protection Measures

Hygiene Measures	Wash hands, forearms, and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/Face Protection	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases, or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
Hand Protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Body Protection	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Other Skin Protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory Protection	Use a properly fitted, air-purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product, and the safe working limits of the selected respirator.

Section 9: Physical and Chemical Properties

Physical State	Liquid	**Vapor Pressure**	Not available
Color	Blue	**Vapor Density**	Not available
Odor	Faint ether odor	**Specific Gravity @ 77°F (25°C)**	Summer formula – 1.17–1.21 Winter formula – 1.20–1.22
Odor Threshold	Not available	**Solubility**	Moderately soluble in water
pH	Not available	**Partition Coefficient: N-Octanol/Water**	Not available
Melting Point	Not available	**Auto-Ignition Temperature**	Not available
Boiling Point	Not available	**Decomposition Temperature**	Not available
Flash Point	Closed cup: >200°F (93°C) (Pensky-Martens)	**Viscosity @ 77°F (25°C)**	Summer formula – 250–350 cps Winter formula – 200–300 cps
Evaporation Rate	Not available	**Volatility**	Not available
Flammability (solid, gas)	Not available		
Lower and Upper Explosive (flammable) Limits	Not available		

Section 10: Stability and Reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical Stability	The product is stable.
Possibility of Hazardous Reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to Avoid	Avoid exposure to moisture and high temperatures to protect product quality.
Incompatible Materials	Strong oxidizing materials, strong acids, and alkali or alkaline earth metals (aluminum, zinc, beryllium, and copper). Avoid unintended contact with isocyanates.
Hazardous Decomposition Products	Decomposition products may include carbon monoxide, carbon dioxide, nitrogen oxides, halogenated compounds, traces of ammonia vapors, phosphoric oxides, aldehydes and ketones, low molecular weight organic products, noxious and toxic fumes.

Section 11: Toxicological Information

11.1 Acute Toxicity

Product/Ingredient Name	Endpoint	Species	Result	Exposure
1,1,1,3,3-Pentafluoropropane	LC50 Inhalation Vapor	Rat	> 1,110 mg/l	4 hours
	LD50 Dermal	Rabbit	> 2,000 mg/kg	-
Tris (2-chloro-1-methylethyl) Phosphate	LC50 Inhalation Dusts & Mists	Rat	17.8 mg/l	1 hour
	LC50 Inhalation Dusts & Mists	Rat	5 mg/l	4 hours
	LD50 Dermal	Rabbit	1,230 mg/kg	-
	LD50 Oral	Rat	1,500 mg/kg	-
Triethyl Phosphate	LD50 Oral	Rat	1,165 mg/kg	-
Trans-dichloroethylene	LC50 Inhalation Gas	Rat	24,100 ppm	4 hours
	LD50 Dermal	Rabbit	> 5 g/kg	-
	LD50 Oral	Rat	1,235 mg/kg	-
Ethanediol	LD50 Oral	Rat	4,700 mg/kg	-
2,2-Oxibisethanol	LD50 Dermal	Rabbit	11,890 mg/kg	-
	LD50 Oral	Rat	12,000 mg/kg	-

11.2 Irritation/Corrosion

Product/Ingredient Name	Result	Species	Score	Exposure	Observation
Triethyl Phosphate	Eyes - Moderate irritant	Rabbit	-	100 mg	-
Trans-dichloroethylene	Eyes - Moderate irritant	Rabbit	-	10 mg	-
	Skin - Moderate irritant	Rabbit	-	24 h 500 mg	-
Ethanediol	Eyes - Mild irritant	Rabbit	-	24 h 500 mg	-
	Eyes - Mild irritant	Rabbit	-	1 h 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	6 h 1440 mg	-
	Skin - Mild irritant	Rabbit	-	555 mg	-
2,2-Oxibisethanol	Eyes - Mild irritant	Rabbit	-	50 mg	-
	Skin - Mild irritant	Human	-	72 h 112 mg Intermittent	-
	Skin - Mild irritant	Rabbit	-	500 mg	-

11.3 Sensitization

There is no data available.

11.4 Carcinogenicity

Classification

Ingredient	OSHA	IARC	NTP	ACGIH	EPA	NIOSH
Ethanediol	-	-	-	A4	-	None
2,2-Oxibisethanol	-	-	-	-	-	None

11.5 Specific Target Organ Toxicity (Single Exposure)

Product/Ingredient	Category	Route of Exposure	Target Organs
1,1,1,3,3-Pentafluoropropane	Category 3	Not applicable	Narcotic effects

11.6 Specific Target Organ Toxicity (Repeated Exposure)

There is no data available.

11.7 Aspiration Hazard

There is no data available.

11.8 Information on the Likely Routes of Exposure

Dermal contact. Eye contact. Inhalation. Ingestion.

11.9 Potential Acute Health Effects

Eye Contact	Causes serious eye irritation.
Inhalation	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin Contact	No known significant effects or critical hazards.
Ingestion	Irritating to mouth, throat, and stomach.

11.10 Symptoms Related to the Physical, Chemical, and Toxicological Characteristics

Eye Contact	Adverse symptoms may include the following: pain or irritation, watering, redness.
Inhalation	No known significant effects or critical hazards.
Skin Contact	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.

11.11 Delayed and Immediate Effects and also Chronic Effects from Short- and Long-Term Exposure

Short-Term Exposure	
Potential Immediate Effects	No known significant effects or critical hazards.
Potential Delayed Effects	No known significant effects or critical hazards.
Long-Term Exposure	
Potential Immediate Effects	No known significant effects or critical hazards.
Potential Delayed Effects	No known significant effects or critical hazards.
Potential Chronic Health Effects	
General	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental Effects	No known significant effects or critical hazards.
Fertility Effects	No known significant effects or critical hazards.

11.12 Numerical Measures of Toxicity – Acute Toxicity Estimates

Route	ATE Value
Oral	5632.4 mg/kg
Dermal	68750 mg/kg
Inhalation (vapors)	392.9 mg/l

Section 12: Ecological Information

12.1 Toxicity

Product/Ingredient Name	Result	Species	Exposure
1,1,1,3,3-Pentafluoropropane	Acute EC50 > 97.9 mg/l	Daphnia	48 hours
	Acute EC50 > 81.8 mg/l	Fish	96 hours
Triethyl Phosphate	Acute LC50 100 mg/l fresh water	Fish - Pimephales promelas - Juvenile (fledgling, hatchling, weanling)	96 hours
Trans-dichloroethylene	Acute LC50 220,000 µg/l fresh water	Daphnia - Daphnia magna	48 hours
Ethanediol	Acute LC50 100,000 µg/l marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Acute LC50 10,000,000 µg/l fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 8,050,000 µg/l fresh water	Fish - Pimephales promelas	96 hours
2,2-Oxibisethanol	Acute LC50 32,000 ppm fresh water	Fish - Gambusia affinis - Adult	96 hours

12.2 Persistence and Degradability

Product/Ingredient Name	Aquatic Half-Life	Photolysis	Biodegradability
Ethanediol	-	-	Readily

12.3 Bioaccumulative Potential

Product/Ingredient Name	LogPow	BCF	Potential
Tris (2-chloro-1-methylethyl) Phosphate	2.68	0.8-2.8	Low
Triethyl Phosphate	1.11	< 1.3	Low
Trans-dichloroethylene	2.09	-	Low
Ethanediol	-1.36	-	Low
2,2-Oxibisethanol	-1.98	100	Low

12.4 Mobility in Soil

Soil/Water Partition Coefficient (Koc) There is no data available.

Other Adverse Effects No known significant effects of critical hazards.

Section 13: Disposal Consideration

13.1 Disposal Methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers.

13.2 United States - RCRA Toxic Hazardous Waste "U" List

Product/Ingredient Name	CAS#	Status	Reference Number
Trans-dichloroethylene	156-60-5	Listed	U079

Section 14: Transportation Information

DOT		TDG	
UN Number	Not regulated	UN Number	Not regulated
UN Proper Shipping Name	–	UN Proper Shipping Name	–
Transport Hazard Class(es)	–	Transport Hazard Class(es)	–
Packing Group	–	Packing Group	–
Environmental Hazard	No	Environmental Hazard	No
Additional Information	–	Additional Information	–

IMDG		IATA	
UN Number	Not regulated	UN Number	Not regulated
UN Proper Shipping Name	–	UN Proper Shipping Name	–
Transport Hazard Class(es)	–	Transport Hazard Class(es)	–
Packing Group	–	Packing Group	–
Environmental Hazard	No	Environmental Hazard	No
Additional Information	–	Additional Information	–

AERG	Not applicable
Special Precautions for User	Transport within user's premises: Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code	Not available

Section 15: Regulatory Information

15.1 United States

U.S. Federal Regulations	TSCA 8(a) PAIR: 2,2-Dimethylpropan-l-ol, tribromo derivative; Triethyl phosphate; Octamethylcyclotetrasiloxane. TSCA 8(c) calls for record of SAR: Tri ethyl phosphate. United States inventory (TSCA Sb): All components are listed or exempted. Clean Water Act (CWA) 307: Trans-dichloroethylene.
Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)	Listed
Clean Air Act Section 602 Class I Substances	Not listed
Clean Air Act Section 602 Class II Substances	Not listed
DEA List I Chemicals (Precursor Chemicals)	Not listed
DEA List II Chemicals (Essential Chemicals)	Not listed
SARA 302/304	No products were found
SARA 304 RQ	Not applicable

15.2 SARA 311/312

Classication Immediate (acute) health hazard.

Composition/Information on Ingredients

Product/Ingredient Name	%	Fire Hazard	Sudden Release of Pressure	Reactive	Immediate (acute) Health Hazard	Delayed (chronic) Health Hazard
1,1,1,3,3-Pentafluoropropane	5-10	No	Yes	No	Yes	No
Tris (2-chloro-1-methylethyl) Phosphate	5-10	No	No	No	Yes	No
Triethyl Phosphate	1-5	No	No	No	Yes	No
Trans-dichloroethylene	1-5	Yes	No	No	Yes	No
Ethanediol	1-5	No	No	No	Yes	No
2,2-Oxibisethanol	1-5	No	No	No	Yes	No
N,N,N',N',N'',N''-Hexamethyl-1,3,5-triazine-1,3,5(2H,4H,6H)-tripropanamine	1-5	No	No	No	Yes	No

15.3 SARA 313

	Product Name	CAS#	%
Form R - Reporting Requirements	Ethanediol	107-21-1	1–5
Supplier Notification	Ethanediol	107-21-1	1–5

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

15.4 State Regulations

Massachusetts	The following components are listed: Ethanediol; Trans-dichloroethylene; Glycerol.
New York	The following components are listed: Ethanediol; Trans-dichloroethylene.
New Jersey	The following components are listed: Ethanediol; Glycerol.
Pennsylvania	The following components are listed: Ethanediol; 2,2'-Oxybisethanol; Trans-dichloroethylene.
California Prop. 65	Glycerol.

15.5 Canada

Canadian Lists

Canadian NPRI	The following components are listed: Ethanediol; 1,1,1,3,3-Pentafluorobutane; 1,1,1,3,3-Pentafluoropropane
CEPA Toxic Substances	The following components are listed: 1,1,1,3,3-Pentafluorobutane; 1,1,1,3,3-Pentafluoropropane.

15.5 International Lists/National Inventory

Australia	Not determined.
China	Not determined.
Europe	Not determined.
Japan	Not determined.
Malaysia	Not determined.
New Zealand	Not determined.
Philippines	Not determined.
Republic of Korea	Not determined.
Taiwan	Not determined.

Section 16: Other Information

Prepared By	Victory Polymers Corp.
Current Issue Date	1/1/2023
Revision Date	3/21/2023

Notice to Reader: To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.