

SECTION 2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION OF HAZARDOUS PRODUCT:

Acute Toxicity, Inhalation-mist (Category 4)
 Skin Sensitization (Category 1B)
 Skin Corrosion/Irritation (Category 2)
 Serious eye damage/irritation (Category 2B)
 Respiratory sensitization (Category 1)
 Carcinogenicity (Category 2)
 Specific target organ toxicity-single exposure (Category 3- respiratory tract irritation)
 Specific target organ toxicity-repeated exposure (Category 2- by inhalation)

HAZARD AND PRECAUTIONARY STATEMENTS

H320 Causes eye irritation.
 H315 Causes skin irritation.
 H332 Harmful if inhaled.
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H317 May cause an allergic skin reaction.
 H335 May cause respiratory irritation.
 H351 Suspected of causing cancer.
 H373 May cause damage to organs (olfactory) through prolonged or repeated exposure (inhalation).
 P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P280 Wear protective gloves. P271 Use only outdoors or in a well-ventilated area. P260 Do not breathe dust/gas/mist/vapours. P261 Avoid breathing mist. P284 In case of inadequate ventilation wear respiratory protection. P272 Contaminated work clothing should not be allowed out of the workplace. P264 Wash with plenty of water and soap thoroughly after handling. P312 Call a POISON CENTER/doctor if you feel unwell. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P308 + P311 IF exposed or concerned: Call a POISON CENTER or doctor/physician. P314 Get medical advice/attention if you feel unwell. P303 + P352 IF ON SKIN (or hair): Wash with plenty of soap and water. P333 + P311 If skin irritation or rash occurs: Call a POISON CENTER or doctor/physician. P332 + P313 If skin irritation occurs: Get medical advice/attention. P362 + P364 Take off contaminated clothing and wash before reuse. P337 + P311 If eye irritation occurs: Call a POISON CENTER or doctor/physician. P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up.
 P501 Dispose of contents/container into safe container in accordance with local, regional or national regulations.
 Other Hazards Known: None known

SECTION 1.

PRODUCT AND COMPANY IDENTIFICATION

PRODUCT IDENTIFIER	PUR-CLUM B
OTHER MEANS OF IDENTIFICATION	NONE
RECOMMENDED USE:	HARDENER, FOR CEMENTITIOUS URETHANE SELF-LEVELING COATING
MANUFACTURED BY:	PUREPOXY 500 DELAWARE AVE, STE 1 #1960 WILMINGTON, DE 19899
E-MAIL ADDRESS :	WWW.PUREPOXY.COM
PREPARED BY:	THE HEALTH, SAFETY AND ENVIRONMENTAL DEPARTMENT OF PUREPOXY
TELEPHONE NUMBER OF PREPARER:	438-492-4450
EMERGENCY TELEPHONE NUMBER:	24-HOUR EMERGENCY TELEPHONE NUMBER CANADA (CANUTEC) : (613) 996-6666

SECTION 3.

COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
diphenylmethane-4,4'-diisocyanate (MDI)	101-68-8	25 - 50 %
p-MDI	9016-87-9	50 - 75 %
Methylenediphenyl diisocyanate	26447-40-5	3 - 7 %
1,3-diazetidone-2,4-dione, 1,3-bis[4-[(4-isocyanatophenyl)methyl]phenyl]-	17589-24-1	1 - 3 %
Isocyanic acid, polymethylenepolyphenylene ester, polymer with alpha-hydro-omega-hydroxypoly(oxy-1,2-ethanediyl)	57636-09-6	1 - 3 %

GHS LABEL ELEMENTS

Hazard Pictograms/symbols



SIGNAL WORD: DANGER

GHS SPECIAL LABELING: EUH204 Contains isocyanates. May produce an allergic reaction. Inhalation of isocyanate mists or vapors may cause respiratory irritation, breathlessness, chest discomfort and reduced pulmonary function. Overexposure well above the pel may result in bronchitis, bronchial spasms and pulmonary edema. Long-term exposure to isocyanates has been reported to cause lung damage, including reduced lung function which may be permanent. Acute or chronic overexposure to isocyanates may cause sensitization in some individuals, resulting in allergic respiratory reactions including wheezing, shortness of breathe and difficulty breathing. Animal tests indicate that skin contact may play a role in causing respiratory sensitization.

SECTION 4.

FIRST AID MEASURES

INHALATION	IF INHALED: Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.
INGESTION	IF SWALLOWED: Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.
SKIN CONTACT	IF ON SKIN: Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.
EYE CONTACT	IF IN EYES: In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Immediate medical attention required.

MOST IMPORTANT SYMPTOMS AND EFFECTS (ACUTE AND DELAYED)

The most important known symptoms and effects are described in the labelling (section 2) and/or in section 11., Eye irritation, skin irritation, allergic symptoms. Symptoms may be delayed.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Hazards: Respiratory sensitization may result in allergic (asthma-like) signs in the lower respiratory tract including wheezing, shortness of breathe and difficulty breathing, the onset of which may be delayed. Repeated inhalation of high concentrations may cause lung damage, including reduced lung function, which may be permanent. Substances eliciting lower respiratory tract irritation may worsen the asthma-like reactions that may be produced by product exposure.

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Specific antidotes or neutralizers to isocyanates do not exist. Treatment should be supportive and based on the judgement of the physician in response to the reaction of the patient.

GENERAL INFORMATION

If exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure the medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

SECTION 5.

FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA:

Suitable extinguishing media: In case of fire: water spray, dry powder, carbon dioxide, foam

Unsuitable extinguishing media: Not available.

SPECIFIC HAZARDS ARISING FROM THE HAZARDOUS PRODUCT: During fire, nitrous gases, fumes/smoke, isocyanates and vapour may be formed.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTING: Self-contained breathing apparatus and turn-out gear must be worn in case of fire.

FURTHER INFORMATION: Keep containers cool by spraying with water if exposed to fire. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

SECTION 6.

ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Clear area. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

For small amounts: Absorb isocyanates with suitable absorbent material. Shovel into open container. Do not make container pressure tight. Move container to a well-ventilated area (outside). Spill area can be decontaminated with the following recommended decontamination solution: Mixture of 90% water, 8% concentrated ammonia, 2% detergent. Add at a 10 to 1 ratio. Allow to stand for at least 48 hours to allow escape of evolved carbon dioxide.

For large amounts: If temporary control of isocyanates vapor is required, a blanket of protein foam or other suitable foam may be placed over the spill.

Transfer as much liquid as possible via pump or vacuum device into closed but not sealed containers for disposal.

For residues: The following measures should be taken for final cleanup: Wash down spill area with decontamination solution. Allow solution to stand for at least 10 minutes. Dike spillage.

ENVIRONMENTAL PRECAUTIONS

Do not discharge into drains/surface waters/groundwater.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Provide suitable exhaust ventilation at the processing machines. Ensure thorough ventilation of stores and work areas. Avoid aerosol formation. When handling heated product, vapours of the product should be ventilated and respiratory protection used. Wear respiratory protection when spraying. Danger of bursting when sealed gastight. Protect against moisture. If bulging of drum occurs, transfer to well-ventilated area, puncture to relieve pressure, open vent and let stand for 48 hours before resealing.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Keep away from water. Segregate from foods and animal feeds. Segregate from acids and bases. Segregate from bases.

Formation of CO₂ and build-up of pressure possible. Keep container tightly closed and in a well-ventilated place. Outage of containers should be filled with dry inert gas at atmospheric pressure to avoid reaction with moisture.

STORAGE STABILITY: Storage temperature: 16-27°C.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

CONTROL PARAMETERS (BIOLOGICAL LIMIT VALUES OR EXPOSURE LIMIT VALUES AND SOURCE OF THOSE VALUES)

Exposure limits:

CAS 101-68-8	OSHA PEL	CLV 0.02ppm	0.2 mg/m ³
	ACGIH TLV	TWA value	0.005ppm
CAS 9016-87-9	OSHA PEL	CLV 0.02ppm	0.2 mg/m ³
	ACGIH TLV	TWA value	0.005ppm
CAS 26447-40-5	No exposure limits noted for the ingredient(s)		
CAS 17589-24-1	No exposure limits noted for the ingredient(s)		
CAS 57636-09-6	OSHA PEL	CLV 0.02ppm	0.2 mg/m ³
	ACGIH TLV	TWA value	0.005ppm

ENGINEERING CONTROLS

Provide good local exhaust ventilation to control vapour/mist. Eye wash facilities and emergency showers must be available when handling this product. Wash soiled clothing immediately. Contaminated equipment or clothing should be cleaned after each use or disposed of.

PERSONAL PROTECTIVE EQUIPMENT

Wear a NIOSH-certified (or equivalent) organic vapor/particulate respirator. Wear appropriate chemical resistant protective gloves. Wear tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists. Wear appropriate protective clothing. When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Eyewash fountains and safety showers are recommended in the work area.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE/ APPEARANCE/ COLOR:	LIQUID, DARK AMBER	VAPOUR PRESSURE:	0.00016 MMHG (20°C)
ODOUR:	FAINTLY AROMATIC	VAPOUR DENSITY:	NOT APPLICABLE
ODOUR THRESHOLD:	NOT APPLICABLE	RELATIVE DENSITY:	1.22 (G/ML)
PH:	NOT APPLICABLE	SOLUBILITY IN WATER:	REACTS WITH WATER
MELTING/FREEZING POINT:	3°C (37.4°F)	PARTITION COEFFICIENT-N-OCTANOL/WATER:	NOT APPLICABLE
INITIAL BOILING POINT/RANGE:	200°C (392°F)	AUTO-IGNITION TEMPERATURE:	>250°C (>482°F)
FLASH POINT(OPEN CUP):	220°C (428°F)	THERMAL DECOMPOSITION TEMPERATURE:	NOT AVAILABLE
EVAPORATION RATE:	NOT AVAILABLE	VISCOSITY:	200 CPS
FLAMMABILITY (SOLIDS AND GASES):	NOT FLAMMABLE	VOC:	NOT AVAILABLE
UPPER AND LOWER FLAMMABILITY/ EXPLOSIVE LIMITS	NOT AVAILABLE	OTHER:	NONE KNOWN

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY: This product is stable and non-reactive under normal conditions of use, storage and transport.

CHEMICAL STABILITY: This product is stable under normal conditions.

POSSIBILITY OF HAZARDOUS REACTIONS: Reacts with water, with formation of carbon dioxide. Risk of bursting. Reacts with alcohols. Reacts with acids. Reacts with alkalis. Reacts with amines. Risk of exothermic reaction. Risk of polymerization. Contact with certain rubbers and plastics can cause brittleness of substance/product with subsequent loss in strength.

CONDITIONS TO AVOID: Avoid moisture.

INCOMPATIBLE MATERIALS: Acids, amines, alcohols, water, alkalines, strong bases, substances/products that react with isocyanates.

HAZARDOUS DECOMPOSITION PRODUCTS: carbon monoxide, carbon dioxide, nitrogen oxide, hydrogen cyanide, aromatic isocyanates, gases/vapours.

SECTION 11. TOXICOLOGICAL INFORMATION

LIKELY ROUTES OF EXPOSURE (INHALATION, INGESTION, SKIN AND EYE CONTACT):

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS:

ASSESSMENT OF ACUTE TOXICITY: Inhalation of vapour may cause irritation of the mucous membranes of the nose, throat or trachea, breathlessness, chest discomfort, difficult breathing and reduced pulmonary function. Inhalation exposure well above the PEL may result additionally in eye irritation.

Headache, chemical bronchitis, asthma-like findings or pulmonary edema. Isocyanates have also been reported to cause hypersensitivity pneumonitis, which is characterized by flu-like symptoms, the onset of which may be delayed. Irritating to eyes, respiratory system and skin. Skin contact may result in dermatitis, either irritative or allergic.

ASSESSMENT OF CHRONIC TOXICITY: The substance may cause damage to the olfactory epithelium after repeated inhalation. The substance may cause damage to the lung after repeated inhalation. These effects are not relevant to humans at occupational levels of exposure.

DELAYED AND IMMEDIATE EFFECTS (CHRONIC EFFECTS FROM SHORT- TERM AND LONG-TERM EXPOSURE):

Skin Sensitization – Sensitization after skin contact possible; Respiratory Sensitization – The substance may cause sensitization of the respiratory tract; Germ Cell Mutagenicity – Results could not be confirmed in tests with mammals; Carcinogenicity – A carcinogenic potential cannot be excluded after prolonged exposure to severely irritating concentrations. IARC Group 3 (not classifiable as to human carcinogenicity); Reproductive Toxicity – Toxicity to development was observed at high doses that were toxic to the parental animals; Specific Target Organ Toxicity — Single Exposure – Causes temporary irritation of the respiratory tract; Specific Target Organ Toxicity - Repeated Exposure – The substance may cause damage to the olfactory epithelium after repeated inhalation; effect are not relevant to humans at occupational levels of exposure; Aspiration Hazard – No aspiration hazard expected; Health Hazards Not Otherwise Classified – No data available.

NUMERICAL MEASURES OF TOXICITY (ATE; LD₅₀ & LC₅₀):

CAS 101-68-8	LD ₅₀ Oral- Rat - >2000 mg/kg
	LC ₅₀ Inhalation - Rat - 2.0 mg/l
	LD ₅₀ Dermal- Rabbit - >9400 mg/kg
CAS 9016-87-9	No data available
CAS 26447-40-5	No data available
CAS 17589-24-1	No data available
CAS 57636-09-6	No data available

SECTION 12. ECOLOGICAL INFORMATION

ECOTOXICITY (AQUATIC AND TERRESTRIAL INFORMATION):

There is a high probability that the product is not acutely harmful to aquatic organisms.

Product	Species	Result
	LC ₀ Brachydanio rerio	>1000 mg/l - 96 h
	EC ₅₀ Daphnia magna	>1000 mg/l – 24 h
	EC ₀ Scenedesmus subspicatus	1640 mg/l – 72 h

PERSISTENCE AND DEGRADABILITY: Poorly biodegradable. The product is unstable in water. In contact with water the substance will hydrolyse slowly.

BIOACCUMULATIVE POTENTIAL: Significant accumulation in organisms is not to be expected.

MOBILITY IN SOIL: The substance will not evaporate into the atmosphere from the water surface. Adsorption to solid soil phase is not expected.

OTHER ADVERSE EFFECTS: No data available.

SECTION 13. DISPOSAL CONSIDERATIONS

INFORMATION ON SAFE HANDLING FOR DISPOSAL/METHODS OF DISPOSAL/CONTAMINATED PACKAGING: Incinerate or dispose of in a licensed facility. Do not discharge substance/product into sewer system.

SECTION 14. TRANSPORT INFORMATION

UN NUMBER; PROPER SHIPPING NAME; CLASS(ES); PACKING GROUP (PG) OF THE TDG REGULATIONS:
Not classified as a dangerous good under transport regulations.

UN NUMBER; PROPER SHIPPING NAME; CLASS(ES); PACKING GROUP (PG) OF THE IMDG (MARITIME):
Not classified as a dangerous good under transport regulations.

UN NUMBER; PROPER SHIPPING NAME; CLASS(ES); PACKING GROUP (PG) OF THE IATA (AIR):
Not classified as a dangerous good under transport regulations.

SPECIAL PRECAUTIONS(TRANSPORT/CONVEYANCE): None

ENVIRONMENTAL HAZARDS (IMDG OR OTHER): None known

BULK TRANSPORT (USUALLY MORE THAN 450L IN CAPACITY): Possible.

SECTION 15. REGULATORY INFORMATION

SAFETY/HEALTH CANADIAN REGULATIONS SPECIFICS: Refer to section 2 for the appropriate classification. This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR).

ENVIRONMENTAL CANADIAN REGULATIONS SPECIFICS: Refer to section 3 for ingredient(s) of the DSL.

SAFETY/HEALTH/ENVIRONMENTAL OUTSIDE REGULATIONS SPECIFICS: None

DATE OF LATEST REVISION OF THE SAFETY DATA SHEET: JANUARY 11TH 2018

NOTICE TO READER:

Purepoxy expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Purepoxy makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Purepoxy/ control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.

END OF S.D.S.