

SECTION 2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION OF HAZARDOUS PRODUCT:

Flammable liquid (Category 3)
Skin corrosion/irritation (Category 3)
Serious eye damage/eye irritation (Category 2A)
Acute Toxicity, Inhalation-mist (Category 4)
Skin Sensitization (Category 1)
Respiratory sensitization (Category 1)
Specific target organ toxicity-single exposure (Category 3- respiratory system)

HAZARD AND PRECAUTIONARY STATEMENTS:

H226 Flammable liquid and vapour.
H332 Harmful if inhaled.
H317 May cause an allergic skin reaction.
H316 Causes mild skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.

P210 Keep away from heat/sparks/open flames/ hot surfaces. 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 discharge. **P280** Wear protective gloves/protective clothing/eye protection/face protection. **P261** Avoid breathing dust/fume/gas/mist/vapors/spray. **P271** Use only outdoors or in a well-ventilated area. **P264** Wash hands thoroughly after handling. **P272** Contaminated work clothing must not be allowed out of the workplace. **P284** In case of inadequate ventilation wear respiratory protection. **P342 + P311** If experiencing respiratory symptoms: Call a poison center/doctor. **P304 + P340** IF INHALED: Remove person to fresh air and keep comfortable for breathing. **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. 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/shower. **P333 + P313** If skin irritation or rash occurs: Get medical advice/attention. **P370 + P378** In case of fire: Use foam, dry chemical, water fog or spray to extinguish. **P403 + P235** Store in a well-ventilated place. Keep cool. 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	PU-3500 B
OTHER MEANS OF IDENTIFICATION	NONE
RECOMMENDED USE:	POLYURETHANE HARDENER
MANUFACTURED BY:	CTM ADHESIVES INC. 8320 GRENACHE MONTRÉAL, QUÉBEC CANADA H1J 1C5
E-MAIL ADDRESS :	WWW.PUREPOXY.COM
PREPARED BY:	THE HEALTH, SAFETY AND ENVIRONMENTAL DEPARTMENT OF CTM ADHESIVES
TELEPHONE NUMBER OF PREPARER:	1-514-321-5540
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EMERGENCY TELEPHONE NUMBER:	24-HOUR EMERGENCY TELEPHONE NUMBER CANADA (CANUTEC) : (613) 996-6666

SECTION 3.

COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS NUMBER	CONCENTRATION (%)
EXAMETHYLENE DISSOCYANATE OLIGOMERS, ISOCYANURATE	28182-81-2	60 - 80 %
HEXAMETHYLENE-DIISOCYANATE	822-06-0	< 0.5 %
1-CHLORO-4-(TRIFLUOROMETHYL)BENZENE	98-56-6	10 - 20 %
PROPYLENE CARBONATE	108-32-7	1 - 10 %

GHS LABEL ELEMENTS

Hazard Pictograms/symbols



SIGNAL WORD: DANGER

GHS SPECIAL LABELING:

H373 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 isocyanates:

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 or fog only to cool, dry powder, foam.

Unsuitable extinguishing media: Do not use water jet as it might spread flame.

SPECIFIC HAZARDS ARISING FROM THE HAZARDOUS PRODUCT:

During fire, nitrous gases, fumes/smoke, isocyanates and vapour may be formed. Combustion products may include: acidic hydrogen chloride & hydrogen fluoride, carbon monoxide, nitrogen oxides and smoke.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTING:

Self-contained breathing apparatus and turn-out gear must be worn in case of fire.

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 spill with suitable absorbent material. Shovel into open container. Do not make container pressure tight. Move container to a well-ventilated area (outside).
For large amounts: Transfer as much liquid as possible via pump or vacuum device into closed but not sealed containers for disposal.

ENVIRONMENTAL PRECAUTIONS:

Contain contaminated water/firefighting water. 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 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. Protect against moisture.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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

CAS 28182-81-2	NO EXPOSURE LIMITS NOTED FOR THE INGREDIENT(S)
CAS 822-06-0	NO EXPOSURE LIMITS NOTED FOR THE INGREDIENT(S)
CAS 98-56-6	NO EXPOSURE LIMITS NOTED FOR THE INGREDIENT(S)
CAS 108-32-7	NO EXPOSURE LIMITS NOTED FOR THE INGREDIENT(S)

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 10. STABILITY AND REACTIVITY

REACTIVITY:

This product is stable and non-reactive under normal conditions of use, storage and transport. CAS 98-56-6 is dangerously reactive with strong oxidising agent, and produces a strongly exothermic reaction with sodium dimethylsulfinate.

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 alkalies. Reacts with amines. Risk of exothermic reaction.

CONDITIONS TO AVOID:

Avoid moisture.

INCOMPATIBLE MATERIALS:

Amines, alcohols, water, substances/products that react with isocyanates.

HAZARDOUS DECOMPOSITION PRODUCTS:

Thermal decomposition of CAS 98-56-6 produces hydrogen chloride and hydrogen fluoride.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE/ APPEARANCE/ COLOR:	LIQUID, LIGHT YELLOW
ODOUR:	FAINTLY AROMATIC
ODOUR THRESHOLD:	NOT AVAILABLE
PH:	NOT AVAILABLE
MELTING/FREEZING POINT:	NOT AVAILABLE
INITIAL BOILING POINT/RANGE:	141°C /285°F
FLASH POINT (CLOSED CUP):	46°C
EVAPORATION RATE:	NOT AVAILABLE
FLAMMABILITY (SOLIDS AND GASES):	FLAMMABLE
UPPER AND LOWER FLAMMABILITY/EXPLOSIVE LIMITS	NOT AVAILABLE
VAPOUR PRESSURE:	NOT AVAILABLE
VAPOUR DENSITY:	NOT AVAILABLE
RELATIVE DENSITY:	1.194 (G/ML)
SOLUBILITY:	REACTS WITH WATER
VISCOSITY:	250 - 350 CPS
PARTITION COEFFICIENT-N-OCTANOL / WATER:	NOT AVAILABLE
AUTO-IGNITION TEMPERATURE:	> 440°C
DECOMPOSITION TEMPERATURE:	NOT AVAILABLE
VOC:	VOC COMPLAINT
OTHER:	NONE KNOWN

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. These effects are not relevant to humans at occupational levels of exposure;

Reproductive Toxicity – No data available;

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 28182-81-2/ CAS 822-06-0	LD ₅₀ Oral- Rat - > 5000mg/kg LC ₅₀ Inhalation - Rat - > 20.0000 mg/l (vapor) > 5.0000 mg/l (mist)
CAS 98-56-6	LD ₅₀ Dermal- Rabbit - > 5000 mg/kg LD ₅₀ Oral- Rat - 68002 & 13000 mg/kg LC ₅₀ Inhalation - Rat - 22000 & 33000 mg/m3
CAS 108-32-7	LD ₅₀ Dermal- Rabbit - > 2000 mg/kg LD ₅₀ Oral - Rat > 5000 mg/kg LD ₅₀ Dermal - Rabbit > 2000 mg/kg

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
CAS 28182-81-2 CAS 822-06-0	LC ₅₀ BRACHYDANIO RERIO EC ₅₀ SCENEDESMUS SUBSPICATUS	>=100 MG/L - 96 H >1000 MG/L - 72 H
CAS 98-56-6	LC ₅₀ LEPOMIS MACROCHIRUS LC ₅₀ LEPOMIS MACROCHIRUS LC ₅₀ SALMO GAIRDNERI EC ₅₀ DAPHNIA MAGNA EC ₅₀ DAPHNIA MAGNA	5.6 MG/L – 96 H 11.4-14.1 MG/L – 72 H 13.5 MG/L – 24 H 3.7 & 5.6 MG/L – 48 H 11.4 – 15.2 MG/L – 24 H
CAS 108-32-7	LC ₅₀ CYPRINUS CARPIO EC ₅₀ DAPHNIA MAGNA (WATER FLEA)	> 1000 MG/L - 96 H > 1000 MG/L - 48 H

MOBILITY IN SOIL:

No data available.

PERSISTENCE AND DEGRADABILITY:

No data available.

OTHER ADVERSE EFFECTS:

No data available.

BIOACCUMULATIVE POTENTIAL:

No data available.

SECTION 13. DISPOSAL CONSIDERATIONS

INFORMATION ON SAFE HANDLING FOR DISPOSAL/METHODS OF DISPOSAL/CONTAMINATED PACKAGING:

Dispose of contents/container into safe container in accordance with local, regional or national regulations.

SECTION 14. TRANSPORT INFORMATION

UN NUMBER; PROPER SHIPPING NAME; CLASS(ES); PACKING GROUP (PG) OF THE TDG REGULATIONS:

UN1263; PAINT RELATED MATERIAL; CLASS 3; PG II

UN NUMBER; PROPER SHIPPING NAME; CLASS(ES); PACKING GROUP (PG) OF THE IMDG (MARITIME):

UN1263; PAINT RELATED MATERIAL; CLASS 3; PG II

UN NUMBER; PROPER SHIPPING NAME; CLASS(ES); PACKING GROUP (PG) OF THE IATA (AIR):

UN1263; PAINT RELATED MATERIAL; CLASS 3; PG II

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: 29 November 2016

Disclaimer:

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END OF S.D.S.