Emergency
CANUTEC 613-996-6666

Product:
ISOCYANATE ENERTHANE ECO
ISOCYANATE 100

Revision date 09-01-2023

ENERLAB
40 YEARS OF CHEMISTRY EXCELLENCE

ENERLAB 2000 Inc.

1895, de l'Industrie
St-Mathieu de Beloeil (Québec)
J3G 4S5

Tel : (450) 446-8554
Watt : (800) 561-8686
Fax : (450) 446-8557

01 :PRODUCT AND COMPANY IDENTIFICATION

Manufacturer	ENERLAB 2000 INC. 1895, de l'Industrie St-Mathieu-de-Beloeil, (Québec) J3G 4S5 Canada Tél : (450) 446-8554 / 1-800-561-8686 Fax : (450) 446-8557
Product name	Isocyanate 100
Chemical family	Polymethylene polyphenylene isocyanate
Use	Component of a polyurethane system
Emergency telephone number	Canutec 613-996-6666

02 : HAZARDS IDENTIFICATION

ROUTES OF EXHIBITION	EYE CONTACT, SKIN CONTACT, INHALATION
	LIQUIDS, AEROSOLS OR PRODUCT VAPORS ARE IRRITATING. MAY CAUSE TEARS
EYE CONTACT	REDNESS AND RASH. IF THE INJURY IS NOT TREATED, CORNEAL DAMAGE MAY OCCUR, AND THE HEALING OF THE INJURY WILL BE SLOW. DAMAGE IS USUALLY REVERSIBLE
SKIN CONTACT	IRRITATION. MAY CAUSE REDNESS, INJURY, ERUPTION, BLEEDING OR FORMATION OF BULBS
INHALATION (ACUTE)	ISOCYANATE VAPORS OR PARTICLES SPRAYED AT CONCENTRATIONS GREATER THAN PERMITABLE EXPOSURE THRESHOLD (TLV) MAY CAUSE IRRITATION (BURNING FEELING) MUCOSAL IN THE RESPIRATORY TRACT CAUSING NASAL FLOW, CRASH, COUGH OPPRESSION, BREAST LACK OF BREATH AND LOW PULMONARY FUNCTION. PEOPLE WITH ALREADY NON-SPECIFIC BRONCHIC HYPERACTIVITY MAY REACT IN LOW VOLUME CONCENTRATIONS WITH SYMPTOMS AND ASTHMA CRISIS. EXPOSURE TO MUCH HIGHER CONCENTRATIONS THAN TLV MAY CAUSE BRONCHITIS, BRONCHIC SPASMS, AND PULMONARY EDEEM. THESE EFFECTS ARE USUALLY REVERSIBLE. HYPERSENSITIVITY PNEUMONIA FROM CHEMICALS HAVE ALSO BEEN REPORTED WITH SYMPTOMS SIMILAR TO INFLUENZA. THESE SYMPTOMS MAY OCCUR SEVERAL HOURS AFTER THE EXHIBITION
INGESTION	MAY IRRITATE AND BURN MUCOSES IN GASTROINTESTINAL PATHWAYS. POSSIBLE SYMPTOMS: SOREBORNE, ABDOMINAL PAIN, NAUSEA, VOMITING, DIARRHEA
EFFECT OF CHRONIC EXPOSURE	PROLONGED CONTACT MAY CAUSE REDNESS, ENFLURY, RASH, DEQUAMATION, BULB FORMULATION AND IN CERTAIN CASES SKIN SENSITIZATION, REPEATED OVEREXPOSURE OR SINGLE DOSE MAY CAUSE SENSITIVE SENSITIZED SENSITIZATION IN SOME PERSONS THAT THEY WILL RESPOND TO SUBSEQUENT EXPOSITIONS AT THE ISOCYANTE AT LEVELS WELL IN DEATH OF TWO TVL. THESE SYMPTOMS, WHICH MAY INCLUDE CHEST DISRUPTIONS, SIFFLANT BREATHING, COUGH, LOSS OF BLOW, OR ASTHMA CRISIS, MAY OCCUR IMMEDIATELY OR LATER. IT HAS BEEN REPORTED THAT AN SENSITIZED PERSON CAN PRESENT THESE SYMPTOMS WHEN EXPOSED TO DUST, COLD AIR OR OTHER IRRITANTS. THIS INCREASED LUNG SENSITIVITY MAY LAST FOR SEVERAL WEEKS AND IN SERIOUS CASES, SEVERAL YEARS. PROLONGED OR REPEATED EXPOSURE MAY CAUSE LUNG DAMAGE AND LOWER PULMONARY FUNCTIONS

03 : COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	# CAS	%	Toxicity
Diisocyanate de diphénylméthane, isomeres et homologues	9016-87-9	60-100	DL50 (rat) > 10.000 mg/kg
4,4'-Diisocyanate de diphénylméthane (4,4'-MDI)	101-68-8	40-50	

04 : FIRST AID MEASURES

EYE CONTACT	RINSE IMMEDIATELY WITH LARGE AMOUNTS OF WATER ALTERNATIVELY WASHING EACH POWDER UNTIL ANY TRACE OF PRODUCT HAS DISAPPEARED (ABOUT 15 MINUTES
SKIN CONTACT	WASH WITH A LOT OF WATER AND SOAP. REMOVE CONTAMINATED CLOTHING, WASH CLOTHING SUBSTANTIALLY SOUGHT BEFORE REUSE
INHALATION AND INGESTION	IN THE EVENT OF INHALATION BRING IN FRESH AIR. IF THERE IS BREATHING BREATHING PRACTICE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. GET MEDICAL ATTENTION. DO NOT INDUCE VOMITING, DRINK 1 TO 2 CUPS OF MILK OR WATER. NEVER GIVE ORAL ADMINISTRATION TO A PERSON UNCONSCIOUS, CONTACT A PHYSICIAN AS SOON AS POSSIBLE
ADDITIONAL INFORMATION	NOTES TO PHYSICIAN: SYMPTOMATIC AND SUPPORTIVE AS NEEDED. FOLLOWING SEVERE EXPOSURE MEDICAL FOLLOW-UP

SHOULD BE MONITORED FOR AT LEAST 48 HOURS. THE FIRST AID PROCEDURE SHOULD BE ESTABLISHED IN CONSULTATION WITH THE DOCTOR RESPONSIBLE FOR INDUSTRIAL MEDICINE.

05 : FIREFIGHTING MEASURES

FLASH POINT(DEG C)	198.8.PENKY-MARTENS CLOSE CUP
TEMPERATURE OF AUTO IGNITION(DEG C)	N/A
SEUIL MAXIMAL D'INFLAMMABILITÉ	N/A
MINIMUM FLAMMABILITY THRESHOLD	N/A
EXTINGUISHING MEDIA	CARBON DIOXIDE, CHEMICAL POWDER, FOAM. IN CASE OF LARGE FIRE SPRAY WATER MUST BE USED
HAZARDOUS COMBUSTION PRODUCT	PROTECT FROM FUMES THAT COULD BE TOXIC AND IRRITANT
SENSITIVITY TO SHOCKS AND STATIC DISCHARGE	NOT APPLICABLE
SPECIAL FIRE FIGHTING MEASURES	FIREFIGHTERS MUST WEAR AN AUTONOMOUS RESPIRATORY APPARATUS TO PROTECT THEM FROM FUMES WHICH COULD BE TOXIC AND IRRITATING. DURING A FIRE ISOCYATIVE VAPORS AND OTHER IRRITATING AND HIGHLY TOXIC GASES MAY BE RELEASED BY THERMAL DECOMPOSITION OR COMBUSTION. COOL THE CONTAINERS EXPOSED TO THE FIRE BY SPRAYING THEM WITH WATER. HEAT WILL CAUSE PRESSURE INCREASE IN CONTAINER AND EXPLOSIVE BREAKAGE MAY OCCUR

06 : ACCIDENTAL RELEASE MESURES

LEAKAGE / SPILL	EVACUATE ALL NON-INDISPENSABLE PERSONNEL. VENTILATE, ELIMINATE ALL IGNITION POINT. END THE PLACE TO CONTAIN SPILL. WEAR FULL PROTECTIVE EQUIPMENT, INCLUDING THE RESPIRATORY, DURING CLEANING
IMPORTANT SPILL	IF SPILLS OCCUR DURING TRANSPORTATION, CALL CANUTEC AT (613) 996-6666. IF THE ISOCYANATE IS TEMPORARILY CONTROLLED TO COVER THE PRODUCT SPILLED FROM PROTEIN FOAM COVERAGE, LARGE QUANTITIES MAY BE PUMPED IN CONTAINERS CLOSED BUT NOT SEALED FOR DISPOSAL.
MINOR SPILL	ABSORB ISOCYANATE WITH WOOD SAW OR OTHER ABSORBENT MATERIAL. REMOVE TO THE SHOVEL AND PLACE THE PRODUCT IN APPROPRIATE CONTAINERS NOT SEALED. TRANSPORT TO A WELL VENTILATED PLACE (OUTSIDE) AND TREAT WITH NEUTRALIZING SOLUTION. 80% WATER MIXTURE AND NON IONIC SURFACTANT TERGITOL TMN-10 (20%), OR MIXTURE OF WATER 90%, AMMONIA CONCENTRATE (FROM 3 TO 8%) AND DETERGENT (2%). MIX THE NEUTRALIZING PRODUCT AND ISOCYANATE IN A 10/1 RATIO. LEAVE REST TO DISCOVER FOR 48 HOURS, TO ALLOW THE CARBON DIOXIDE TO DISENGAGE.
CLEANING	DECONTAMINATE FLOOR FOR AT LEAST 15 MINUTES WITH DECONTAMINATION SOLUTION

07 : HANDLING AND STORAGE

PROCÉDURE ET MANUTENTION	AVOID CONTACT WITH SKIN AND EYES. AVOID BREATHING THE VAPORS. PRECURSOR SYMPTOMS (IRRITATION OF YEVETING SKIN AND EYE CONTACT, AVOID BREATHING VAPORS, PRECURSOR SYMPTOMS (EYE, NOSE, THROAT AND ODOR IRRITATION) AND ODOR) ARE NOT SUFFICIENT TO AVOID OVEREXPOSURE INHALATION: EMPLOYEE INFORMATION AND STAFF TRAINING, NOSE AND THROAT, AND ODOR) ARE NOT SUFFICIENT TO AVOID OVEREXPOSURE BY INHALATION. EMPLOYEE INFORMATION AND STAFF TRAINING MATTER
CONDITION D'ENTREPOSAGE	STORE IN A CLOSED LOCATION TO AVOID CONTAMINATION BY MOISTURE. STORE AWAY FROM ANY SOURCE OF HEAT AND IGNITION POINT (MIN / MAX: 18/30 ° C). DO NOT CLOSE HERMETICALLY IF IT IS LIKELY THAT THE PRODUCT IS CONTAMINATED. HEATED ISOCYANATE VAPORS CAN BE VERY DANGEROUS

08 : EXPOSURE CONTROL / PERSONAL PROTECTION

EYES	SAFETY GLASSES OR 8 INCH VISOR. DO NOT WEAR CONTACT LENSES
RESPIRATORY	IN SUCH CASES, OR WHEN THE ISOCYANATE CONCENTRATIONS EXCEED THE EXPOSURE LIMITS, RESPIRATORY PROTECTION SHOULD BE USED. A POSITIVE PRESSURE RESPIRATOR WITH FREE AIR OR AN INDEPENDENT RESPIRATORY APPARATUS IS RECOMMENDED. AN AIR PURIFYING RESPIRATOR IS NOT RECOMMENDED DUE TO LOW WARNING PROPERTIES, INCLUDING SMELL OR IRRITATION OF THE PRODUCT
GLOVES	GLOVES RESISTANT TO CHEMICAL PRODUCTS IN BUTYL OR NITRILE RUBBER. PRODUCE GOOD HYGIENE, WASH WELL BEFORE HANDLING FOOD
CLOTHES AND SHOES	WEAR APPROPRIATE CLOTHING AND PROTECTORS
OTHER	EYE SHOWER. EMERGENCY SHOWER SHOULD BE NEARBY
VENTILATION REQUIRED	WHEN ISOCYANATES ARE PROCESSED, HEATED OR SPRAYED, LOCAL VENTILATION SHOULD BE USED TO MAINTAIN CONCENTRATIONS IN THE AIR UNDER THE TLV. WEAR AN APPROPRIATE RESPIRATORY MASK. WELL ADJUST WHEN THE LEVEL OF CONTAMINATION EXCEEDS THE PERMITABLE THRESHOLD OF EXPOSURE. AVOID BREATHING DUST. IF GENERAL OR LOCAL VENTILATIONS ARE INADEQUATE, PERSONS EXPOSED TO DRIZZLES SHOULD WEAR AN APPROPRIATE RESPIRATORY MASK
MONITORING	THE EXHIBITION VALUES SHOULD BE MONITORED BY MONITORING TECHNIQUES TO ENSURE THAT THE EXPOSURE LIMIT VALUE (YVL) IS NOT EXCEEDED
MEDICAL SUPERVISION	MEDICAL SURVEILLANCE OF ALL EMPLOYEES WHO HANDLE OR COME INTO CONTACT WITH ISOCYANATES IS RECOMMENDED. THIS SURVEILLANCE SHOULD INCLUDE MEDICAL EXAMINATIONS AT THE TIME OF COMMITMENT AND PERIODIC EXAMINATIONS, INCLUDING EXAMINATIONS OF RESPIRATORY FUNCTION (FEV, FVC MINIMUM). PERSONS WITH CONDITIONS OF THE ASTHMATIC GENUS, CHRONIC BRONCHITIS, OTHER CHRONIC RESPIRATORY DISEASES, ECZEMA OR SKIN SENSITIZATION SHOULD NOT WORK WITH ISOCYANATES. ONCE A PERSON HAS ESTABLISHED ISOCYANATE SENSITIZATION, IT SHOULD NOT BE EXPOSED TO THIS PRODUCT

09 :PHYSICAL AND CHEMICAL PROPERTIES

Appearance	liquid
Odour	musty
Density	1.24 @ 20 °C
Odour Treshold	N/A
Vapour pressure	<0.00001 mmHg. @ 25 °C (dim)
Vapour Density (AIR = 1)	8.5 (dim)
Evaporation rate	N/A
Boiling point (760 MMHG)	decompose before boiling
Flash point	>204°C
pH	N/A
Water solubility	INSOLUBLE, REACTS, CO2 FORMATION
Partition coefficient: n-octanol/water	REACTS WITH WATER
Freezing point (DEG. C)	crystallise below 10 °C
Decomposition temperature	>230°C
Viscosity, dynamic	150-220 cps @ 25°C

10 : STABILITY AND REACTIVITY

HAZARDOUS REACTIONS	Contact With Moisture, Alkali, Tertiary Amines, Metal Compounds Or Other Products That Can React With Isocyanates, Or At High Temperatures. May Cause Polymerization.
STABILITY	Stable Under Recommended Storage Conditions
CHEMICAL INCOMPATIBILITY	Water, Amines, Strong Bases, Alcohols, Cause Corrosion To Copper And Aluminum Alloys
HAZARDOUS DECOMPOSITION PRODUCTS	By Fire And Heat: Carbon Monoxide, Nitrogen Oxide, Hydrogen Cyanide, Carbon Dixide

11 : TOXICOLOGICAL INFORMATION

ACUTE ORAL TOXICITY (DL50)	> 10.000 mg/kg (rat)
DERMAL TOXICITY (DL50)	>9.400 mg/kg (lapin)
INHALATION (CL50)	POLYMER : 490 mg/m^3 (rat). monomeric : 2240 mg/m^3 (rat).
IRRITATION BY PRODUCT	May Cause Moderate Eye Irritation And Light And Temporary Corneal Injuries
SENSITIZATION	Skin Contact May Cause Skin Allergic Reaction. Studies On Animals Have Revealed That Skin Contact With Isocyanates Can Play A Role In Respiratory Sensitization
Carcinogenicity	Pulmonary Tumors Have Been Recorded In Laboratory Animals Exposed To Drops From Mdi Aerosols And Polymeric Mdi (6 Mg / M3) During All Their Lives. Current Exposure Limits Should Protect Against These Effects
MUTAGENICITY	Mdi Was Lowly Positive In Some In Vitro Studies. Other In Vitro Studies Have Been Negative. Mutagenicity Studies On Animals Have Been Mainly Negative
REPRODUCTIVE TOXICITY	No Data Found

12 : ECOLOGICAL INFORMATION

TOXICITY TO FISH	CL50 >1000 mg/l
TIME	24 h
SPECIES	danio rerio

13 : DISPOSAL CONSIDERATION

DISPOSAL	SPILLED AND RINSING WATER IS CLASSIFIED CHEMICAL WASTE AND MUST BE DISPOSED OF ACCORDING TO MUNICIPAL, PROVINCIAL AND FEDERAL REGULATIONS. INCINERATION IS THE PREFERRED METHOD. EMPTY CONTAINERS MUST BE HANDLING CAREFULLY WITH RESIDUES. DECONTAMINATE CONTAINERS BEFORE DISPOSING. DECONTAMINATED EMPTY CONTAINERS SHOULD BE CRUSHED TO AVOID THEIR REUSE. DO NOT HEAT OR CUT EMPTY CONTAINERS WITH AN ELECTRICAL OR GAS TORCH. VAPORS AND GASES MAY BE TOXIC

14 : TRANSPORT INFORMATION

TDG	Not dangerous goods

15 : REGULATORY INFORMATION

WHMIS CLASSIFICATION	CONTROL D2A. D2B. THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA UNDER THE CONTROLLED PRODUCTS REGULATIONS AND MATERIAL SAFETY DATA SHEET CONTAINS THE INFORMATION REQUIRED BY THE CONTROLLED PRODUCTS REGULATIONS

16 : OTHER INFORMATION

NOTE	THIS INFORMATION, WHICH IS GIVEN WITH NO WARRANTY, EXPRESS OR IMPLIED, IS BASED ON KNOWLEDGE AND APPLIES ONLY TO THE PRODUCT LISTED. ENERLAB 2000 INC. DISCLAIMS ANY LEGAL RESPONSIBILITY FOR THE USE AND RELIABILITY OF THE INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET

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