

SAFETY DATA SHEET

PRODUCT: RESULT

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SECTION 01: PRODUCT AND COMPANY INFORMATION

MANUFACTURER/SUPPLIER LES INVESTISSEMENTS B.S.C. INC.
 MANUFACTURER'S/SUPPLIERS ADDRESS..... 109 IBER RD., UNIT #3, OTTAWA, ON K2S 0X5 613-744-8896
 PRODUCT NAME RESULT
 PRODUCT USE INDUSTRIAL DEGREASER
 EMERGENCY PHONE NUMBER..... CANUTECH 613-996-6666

SECTION 02: HAZARDS IDENTIFICATION



ROUTE OF ENTRY:
 SKIN CONTACT CORROSIVE. CAUSES SKIN BURNS.
 SKIN ABSORPTION N.AV.
 EYE CONTACT CORROSIVE. CAUSES EYE BURNS.
 INHALATION..... EXCESSIVE EXPOSURE MAY CAUSE IRRITATION TO UPPER RESPIRATORY TRACT. (NOSE AND THROAT). IN HUMANS, SYMPTOMS MAY INCLUDE: HEADACHE. IN ANIMALS, EFFECTS HAVE BEEN REPORTED ON THE FOLLOWING ORGANS: BLOOD (HEMOLYSIS). SECONDARY EFFECTS TO THE KIDNEY AND LIVER. HUMAN RED BLOOD CELLS HAVE BEEN SHOWN TO BE SIGNIFICANTLY LESS SENSITIVE TO HEMOLYSIS THAN THOSE OF RODENTS AND RABBITS.
 INGESTION CORROSIVE. CAUSES BURNS TO MOUTH, OESOPHAGUS, AND STOMACH.
 EFFECTS/SYMPTOMS OF ACUTE EXPOSURE SEE ABOVE.
 EFFECTS/SYMPTOMS OF CHRONIC EXPOSURE.... IN LONG-TERM ANIMAL STUDIES WITH ETHYLENE GLYCOL BUTYL ETHER, SMALL BUT STATISTICALLY SIGNIFICANT INCREASES IN TUMORS WERE OBSERVED IN MICE BUT NOT RATS. THE EFFECTS ARE NOT BELIEVED TO BE RELEVANT TO HUMANS. IF THE MATERIAL IS HANDLED IN ACCORDANCE WITH PROPER INDUSTRIAL HANDLING, EXPOSURES SHOULD NOT POSE A CARCINOGENIC RISK TO MAN. HAS BEEN TOXIC TO THE FETUS IN LAB ANIMALS AT DOSES TOXIC TO THE MOTHER. IN ANIMAL STUDIES, EFFECTS ON REPRODUCTION HAVE BEEN SEEN ONLY AT DOSES THAT PRODUCED SIGNIFICANT TOXICITY TO THE PARENT ANIMALS.
 MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE..... N.AV.

SECTION 03: COMPOSITION / INFORMATION ON INGREDIENTS HAZARDS IDENTIFICATION

HAZARDOUS INGREDIENTS	C.A.S. #	%	TLV	LD50	LC50
ETHER MONOBUTYLE D'ETHYLENE GLYCOL	111-76-2	3 - 7	VOIR SECTION 11	VOIR SECTION 11	VOIR SECTION 11
ALCOHOLS, C9-11, ETHOXYLATED	68439-46-3	1 - 5	N.AV.	>2000 MG/KG (ORAL, RAT) 3300 MG/KG (DERMAL, RAT)	N.AV.
XYLÈNE SULFONATE DE SODIUM	1300-72- 7	1 - 5	N.D.	>5 G/KG (ORAL, RAT)	N.D.
SILICIC ACID, DISODIUM SALT; DISODIUM TRIOXOSILICATE; SODIUM METASILICATE	6834-92-0	1 - 5	N.AV.	N.AV.	N.AV.

SECTION 04: FIRST AID MEASURES

SKIN CONTACT	IN CASE OF CONTACT, IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. GET MEDICAL ATTENTION IMMEDIATELY. WASH CLOTHING BEFORE REUSE. THOROUGHLY CLEAN SHOES BEFORE REUSE.
EYE CONTACT.....	IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. IF EASY TO DO, REMOVE CONTACT LENSES, IF WORN. GET MEDICAL ATTENTION.
INHALATION.....	MOVE TO FRESH AIR. CALL A PHYSICIAN IMMEDIATELY. IF BREATHING IS IRREGULAR OR STOPPED, ADMINISTER ARTIFICIAL RESPIRATION.
INGESTION	IF SWALLOWED, DO NOT INDUCE VOMITING. GET MEDICAL ATTENTION IMMEDIATELY. IF VICTIM IS FULLY CONSCIOUS, GIVE A CUPFUL OF WATER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.
NOTES TO PHYSICIAN.....	DUE TO STRUCTURAL ANALOGY AND CLINICAL DATA, THIS MATERIAL MAY HAVE A MECHANISM OF INTOXICATION SIMILAR TO ETHYLENE GLYCOL. ON THAT BASIS, TREATMENT SIMILAR TO ETHYLENE GLYCOL INTOXICATION MAY BE OF BENEFIT. IN CASES WHERE SEVERAL OUNCES HAVE BEEN INGESTED, CONSIDER THE USE OF ETHANOL AND HEMODIALYSIS IN THE TREATMENT. CONSULT STANDARD LITERATURE FOR DETAILS OF TREATMENT. IF ETHANOL IS USED, A THERAPEUTICALLY EFFECTIVE BLOOD CONCENTRATION IN THE RANGE OF 100 - 150 MG/DL MAY BE ACHIEVED BY A RAPID LOADING DOSE FOLLOWED BY A CONTINUOUS INTRAVENOUS INFUSION. CONSULT STANDARD LITERATURE FOR DETAILS OF TREATMENT. 4-METHYL PYRAZOLE (ANTIZOL) IS AN EFFECTIVE BLOCKER OF ALCOHOL DEHYDROGEN ASE AND SHOULD BE USED IN THE TREATMENT OF ETHYLENE GLYCOL, DI- OR TRIETHYLENE GLYCOL, ETHYLENE GLYCOL BUTYL ETHER, OR METHANOL INTOXICATION IF AVAILABLE. FOMEPIZOLE PROTOCOL (BRENT, J. ET AL., NEW ENGLAND JOURNAL OF MEDICINE, FEB 8, 2001, 344:6, P. 424-9); LOADING DOSE 15 MG/KG IV, FOLLOW BY BOLUS DOSE OF 10 MG/KG EVERY 12 HOURS; AFTER 48 HOURS, INCREASE BOLUS DOSE TO 15 MG/KG EVERY 12 HOURS. CONTINUE FOMEPIZOLE UNTIL SERUM METHANOL, EG, DEG, OR TEG ARE UNDETECTABLE. THE SIGNS AND SYMPTOMS OF POISONING INCLUDE ANION GAP METABOLIC ACIDOSIS, CNS DEPRESSION, RENAL TUBULAR INJURY, AND POSSIBLE LATE STAGE CRANIAL NERVE INVOLVEMENT. RESPIRATORY SYMPTOMS, INCLUDING PULMONARY EDEMA, MAY BE DELAYED. PERSONS RECEIVING SIGNIFICANT EXPOSURE SHOULD BE OBSERVED 24-48 HOURS FOR SIGNS OF RESPIRATORY DISTRESS. MAINTAIN ADEQUATE VENTILATION AND OXYGENATION OF THE PATIENT. IN SEVERE POISONING, RESPIRATORY SUPPORT WITH MECHANICAL VENTILATION AND POSITIVE END EXPIRATORY PRESSURE MAY BE REQUIRED. IF LAVAGE IS PERFORMED, SUGGEST ENDOTRACHEAL AND/OR ESOPHAGEAL CONTROL. DANGER FROM LUNG ASPIRATION MUST BE WEIGHED AGAINST TOXICITY WHEN CONSIDERING EMPTYING THE STOMACH. IF BURN IS PRESENT, TREAT AS ANY THERMAL BURN, AFTER DECONTAMINATION. TREATMENT OF EXPOSURE SHOULD BE DIRECTED AT THE CONTROL OF SYMPTOMS AND THE CLINICAL CONDITION OF THE PATIENT.

SECTION 05: FIRE FIGHTING MEASURES

CONDITIONS OF FLAMMABILITY	NON-FLAMMABLE.
MEANS OF EXTINCTION/EXTINGUISHING MEDIA: ..	DRY POWDER, WATER SPRAY, FOAM.
FLASH POINT.....	72.3 (C)
UPPER FLAMMABLE LIMIT (% BY VOLUME).....	N.AV.
LOWER FLAMMABLE LIMIT (% BY VOLUME).....	N.AV.
AUTO-IGNITION TEMPERATURE	N.AV.
SPECIAL FIRE FIGHTING PROCEDURES.....	FIRE FIGHTERS SHOULD WEAR FULL PROTECTIVE CLOTHING, INCLUDING SELF-CONTAINED BREATHING EQUIPMENT. USE WATER SPRAY TO COOL UNOPENED CONTAINERS.
UNUSUAL FIRE AND EXPLOSION HAZARDS.....	N.AV.

EXPLOSION DATA.....	N.AV.
SENSITIVITY TO MECHANICAL IMPACT	N.AV.
SENSITIVITY TO STATIC DISCHARGE	N.AV.
HAZARDOUS COMBUSTION PRODUCTS	DURING A FIRE, SMOKE MAY CONTAIN THE ORIGINAL MATERIAL IN ADDITION TO COMBUSTION PRODUCTS OF VARYING COMPOSITION WHICH MAY BE TOXIC AND/OR IRRITATING. COMBUSTION PRODUCTS MAY INCLUDE AND ARE NOT LIMITED TO: CARBON MONOXIDE, CARBON DIOXIDE.

SECTION 06: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES.....	CONTAIN SPILLED MATERIAL IF POSSIBLE. SMALL SPILLS: ABSORB WITH MATERIALS SUCH AS: DIRT, SAND. LARGE SPILLS: COLLECT IN SUITABLE AND PROPERLY LABELLED CONTAINERS. SEE SECTION 13, DISPOSAL CONSIDERATIONS FOR ADDITIONAL INFORMATION. ISOLATE AREA. REFER TO SECTION 7, HANDLING FOR ADDITIONAL PRECAUTIONARY MEASURES. KEEP UNNECESSARY AND UNPROTECTED PERSONNEL FROM ENTERING THE AREA. KEEP PERSONNEL OUT OF LOW AREAS. KEEP UPWIND OF SPILL. VENTILATE AREA OF LEAK OR SPILL. NO SMOKING IN AREA. USE APPROPRIATE SAFETY EQUIPMENT. FOR ADDITIONAL INFORMATION, REFER TO SECTION 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION. PREVENT FROM ENTERING INTO SOIL, DITCHES, SEWERS, WATERWAYS AND/OR GROUNDWATER. NEUTRALIZE CONTAMINATED AREA AND FLUSH WITH LARGE QUANTITIES OF WATER.
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SECTION 07: HANDLING AND STORAGE

HANDLING PROCEDURES AND EQUIPMENT.....	AVOID CONTACT WITH EYES, SKIN AND CLOTHING. AVOID BREATHING VAPOR. USE WITH ADEQUATE VENTILATION. WASH THOROUGHLY AFTER HANDLING.
STORAGE REQUIREMENTS.....	STORE IN A COOL, DRY, WELL-VENTILATED AREA, AWAY FROM HEAT AND IGNITION SOURCES. PLACE AWAY FROM INCOMPATIBLE MATERIALS. STORE IN ACCORDANCE WITH GOOD INDUSTRIAL PRACTICES.

SECTION 08: EXPOSURE CONTROLS AND PERSONAL PROTECTION

ENGINEERING CONTROL.....	PROVIDE GENERAL AND/OR LOCAL EXHAUST VENTILATION TO CONTROL AIRBORNE LEVELS BELOW THE EXPOSURE GUIDELINES.
PERSONAL PROTECTIVE EQUIPMENT:	
SKIN PROTECTION	WEAR BODY-COVERING PROTECTIVE CLOTHING AND GLOVES.
EYE/FACE PROTECTION	USE CHEMICAL GOGGLES. IF EXPOSURE CAUSES EYE DISCOMFORT, USE A FULL-FACE RESPIRATOR.
RESPIRATORY PROTECTION	WHEN RESPIRATORY PROTECTION IS REQUIRED FOR CERTAIN OPERATIONS, USE AN APPROVED AIR-PURIFYING RESPIRATOR.
WORK/HYGIENE PRACTICES	EYE WASH; SAFETY SHOWER; PROTECTIVE CLOTHING (LONG SLEEVES, COVERALLS OR OTHER, AS APPROPRIATE), WHEN NEEDED, TO PREVENT SKIN CONTACT.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE.....	LIQUID
APPEARANCE & ODOUR.....	RED COLOUR – BUTYL SCENT
ODOUR THRESHOLD	N.AV.
SPECIFIC GRAVITY	1.037
VAPOUR PRESSURE (MMHG).....	N.AV.
VAPOUR DENSITY (AIR=1).....	N.AV.
EVAPORATION RATE.....	N.AV.
BOILING POINT.....	100°C
FREEZING/MELTING POINT	0°C
PH	14
SOLUBILITY IN WATER (% W/W).....	SOLUBLE.
COEFFICIENT OF WATER/OIL DISTRIBUTION	N.AV.

SECTION 10: STABILITY AND REACTIVITY

STABILITY	STABLE UNDER NORMAL OPERATING CONDITIONS.
CONDITIONS TO AVOID.....	AVOID ANY SOURCE OF IGNITION.
INCOMPATIBILITY (MATERIALS TO AVOID).....	STRONG ACIDS. STRONG OXIDIZERS. STRONG BASES. MAY REACT WITH AMMONIUM SALT SOLUTIONS RESULTING IN EVOLUTION OF AMMONIA GAS. FLAMMABLE HYDROGEN GAS MAY BE PRODUCED ON CONTACT WITH ALUMINUM, TIN, LEAD, AND ZINC. CARBON MONOXIDE GAS MAY BE PRODUCED ON CONTACT WITH REDUCING SUGARS (METSO).
HAZARDOUS DECOMPOSITION PRODUCT.....	OXIDES OF CARBON. HYDROGEN (METSO). DECOMPOSITION PRODUCTS CAN INCLUDE AND ARE NOT LIMITED TO: ALDEHYDES, KETONES, ORGANIC ACIDS.
HAZARDOUS POLYMERIZATION	WILL NOT OCCUR.

SECTION 11: TOXICOLOGICAL INFORMATION

EXPOSURE LIMITS.....	SEE SECTION 3.
IRRITANCY OF MATERIAL	SEE SECTION 3.
LD50.....	SEE SECTION 3.
LC50.....	N.AV.
SENSITIZATION TO PRODUCT	N.AV.
CARCINOGENICITY.....	IN LONG-TERM ANIMAL STUDIES WITH ETHYLENE GLYCOL BUTYL ETHER, SMALL BUT STATISTICALLY SIGNIFICANT INCREASES IN TUMORS WERE OBSERVED IN MICE BUT NOT RATS. THE EFFECTS ARE NOT BELIEVED TO BE RELEVANT TO HUMANS. IF THE MATERIAL IS HANDLED IN ACCORDANCE WITH PROPER INDUSTRIAL HANDLING, EXPOSURES SHOULD NOT POSE A CARCINOGENIC RISK TO MAN.
REPRODUCTIVE TOXICITY	ETHYLENE GLYCOL BUTYL ETHER: IN ANIMAL STUDIES, EFFECTS ON REPRODUCTION HAVE BEEN SEEN ONLY AT DOSES THAT PRODUCED SIGNIFICANT TOXICITY TO THE PARENT ANIMALS.
TERATOGENICITY.....	N.AV.
MUTAGENICITY	N.AV.
TOXICOLOGICAL SYNERGISTIC PRODUCTS.....	N.AV.
CHRONIC TOXICITY	N.AV.
DEVELOPMENTAL TOXICITY	ETHYLENE GLYCOL BUTYL ETHER: HAS BEEN TOXIC TO THE FETUS IN LAB ANIMALS AT DOSES TOXIC TO THE MOTHER. DID NOT CAUSE BIRTH DEFECTS IN LABORATORY ANIMALS.
SIGNIFICANT DATA WITH POSSIBLE RELEVANCE TO HUMANS.....	ETHYLENE GLYCOL BUTYL ETHER: REPEATED DOSE TOXICITY: IN ANIMALS, EFFECTS HAVE BEEN REPORTED ON THE FOLLOWING ORGANS: BLOOD (HEMOLYSIS). SECONDARY EFFECTS TO THE KIDNEY AND LIVER. HUMAN RED BLOOD CELLS HAVE BEEN SHOWN TO BE SIGNIFICANTLY LESS SENSITIVE TO HEMOLYSIS THAN THOSE OF RODENTS AND RABBITS.

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION	N.AV.
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SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL.....	IN ACCORDANCE WITH MUNICIPAL, PROVINCIAL AND FEDERAL REGULATIONS.
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SECTION 14: TRANSPORT INFORMATION

PROPER SHIPPING NAME.....	CORROSIVE LIQUIDS, N.O.S. (DISODIUM TRIOXOSILICATE)
TDG CLASSIFICATION	8
UN NUMBER	1760
PACKGING GROUP	III

SECTION 15: REGULATORY INFORMATION

WHMIS CLASSIFICATION B3. D1A. D2B. E.
CPR COMPLIANCE THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE
HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS
REGULATIONS (CPR) AND THE MSDS CONTAINS ALL THE
INFORMATION REQUIRED BY THE CPR.

SECTION 16: OTHER INFORMATION

PREPARATION INFORMATION PREPARED BY: REGULATORY AFFAIRS, TELEPHONE - (613)-744-8896
PREPARATION DATE: JULY 1, 2016
N.A.V. = NOT AVAILABLE
N.A.P. = NOT APPLICABLE