

SAFETY DATA SHEET

PRODUCT: BIG SHOT

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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	BIG SHOT
PRODUCT USE	INDUSTRIAL DEGREASER
EMERGENCY PHONE NUMBER.....	CANUTECH 613-996-6666

SECTION 02: HAZARDS IDENTIFICATION



ROUTE OF ENTRY:	
SKIN CONTACT	DERMAL EXPOSURE CAN CAUSE SEVERE IRRITATION AND/OR BURNS CHARACTERIZED BY REDNESS, SWELLING AND SCAB FORMATION. PROLONGED SKIN EXPOSURE MAY CAUSE PERMANENT DAMAGE. DUST OR MIST FROM SOLUTIONS CAN CAUSE IRRITANT DERMATITIS.
SKIN ABSORPTION	N.AV.
EYE CONTACT.....	CAUSES EYE BURNS. DIRECT CONTACT MAY CAUSE IMPAIRMENT OF VISION AND CORNEAL DAMAGE.
INHALATION.....	INHALATION OF DUST OR MISTS CAN CAUSE DAMAGE TO THE UPPER RESPIRATORY TRACT AND TO THE LUNG TISSUE DEPENDING ON SEVERITY OF EXPOSURE. EFFECTS CAN RANGE FROM MILD IRRITATION OF MUCOUS MEMBRANES, SEVERE PNEUMONITIS AND DESTRUCTION OF LUNG TISSUES. INHALATION OF HIGH CONCENTRATIONS CAN RESULT IN PERMANENT LUNG DAMAGE. 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
INGESTION	BLOOD CELLS HAVE BEEN SHOWN TO BE SIGNIFICANTLY LESS SENSITIVE TO HEMOLYSIS THAN THOSE OF RODENTS AND RABBITS. IRRITATION AND/OR BURNS CAN OCCUR TO THE ENTIRE GASTROINTESTINAL TRACT, INCLUDING THE STOMACH AND INTESTINES, CHARACTERIZED BY NAUSEA, VOMITING, DIARRHEA, ABDOMINAL PAIN, AND BLEEDING AND/OR TISSUE ULCERATION. MAY BE FATAL.
EFFECTS/SYMPTOMS OF ACUTE EXPOSURE ...	REFER TO ROUTE OF ENTRY.
EFFECTS/SYMPTOMS OF CHRONIC EXPOSURE	CHRONIC INHALATION EXPOSURE MAY CAUSE IMPAIRMENT OF LUNG FUNCTION AND PERMANENT LUNG DAMAGE. EFFECTS FROM CHRONIC SKIN EXPOSURE WOULD BE SIMILAR TO THOSE FROM SINGLE EXPOSURE EXCEPT FOR EFFECTS SECONDARY TO TISSUE DESTRUCTION. 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.....	ASTHMA. RESPIRATORY AND CARDIOVASCULAR DISEASE.

SECTION 03: COMPOSITION / INFORMATION ON INGREDIENTS HAZARDS IDENTIFICATION

HAZARDOUS INGREDIENTS	C.A.S. #	%	TLV	LD50	LC50
SODIUM HYDROXIDE	1310-73-2	7 - 14	SEE SECTION 11	SEE SECTION 11	SEE SECTION 11

MONOETHANOLAMINE	141-43-5	1 - 5	SEE SECTION 11	SEE SECTION 11	SEE SECTION 11
SODIUM XYLENE SULPHONATE	1300-72-7	5 - 10	N.A.V.	7200 MG/KG (ORAL, RAT)	N.A.V.

SECTION 04: FIRST AID MEASURES

SKIN CONTACT	IMMEDIATELY FLUSH WITH WATER FOR AT LEAST 15 MINUTES. SEEK MEDICAL ATTENTION AT ONCE. IF CLOTHING, SHOES AND/OR JEWELRY COME IN CONTACT WITH THE PRODUCT, THEY SHOULD BE REMOVED IMMEDIATELY AND LAUNDERED BEFORE RE-USE.
EYE CONTACT.....	IMMEDIATELY FLUSH WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES, OCCASIONALLY LIFTING THE UPPER AND LOWER EYELIDS. CHECK FOR AND REMOVE CONTACT LENSES. SEEK MEDICAL ATTENTION AT ONCE.
INHALATION.....	REMOVE TO FRESH AIR. IF PERSON EXPERIENCES NAUSEA, HEADACHE OR DIZZINESS, PERSON SHOULD STOP WORK IMMEDIATELY AND MOVE TO FRESH AIR UNTIL THESE SYMPTOMS DISAPPEAR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN, KEEP THE PERSON WARM AND AT REST. SEEK MEDICAL ATTENTION. IN THE EVENT THAT AN INDIVIDUAL INHALES ENOUGH VAPORS TO LOSE CONSCIOUSNESS, PERSON SHOULD BE REMOVED TO FRESH AIR AT ONCE AND A PHYSICIAN SHOULD BE CALLED IMMEDIATELY. IN ALL CASES, ENSURE ADEQUATE VENTILATION AND PROVIDE RESPIRATORY PROTECTION BEFORE THE PERSON RETURNS TO WORK.
INGESTION	RINSE MOUTH THOROUGHLY WITH WATER. IMMEDIATELY DRINK LARGE QUANTITIES OF WATER. DO NOT INDUCE VOMITING. SEEK MEDICAL ATTENTION AT ONCE. DO NOT GIVE ANYTHING BY MOUTH IF VICTIM IS UNCONSCIOUS OR IF HAVING CONVULSIONS.
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:	USE DRY CHEMICALS, CO2, ALCOHOL FOAM OR WATER SPRAY.
FLASH POINT	>110 (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. ISOLATE AND RESTRICT AREA ACCESS. FIGHT FIRE FROM A SAFE DISTANCE AND FROM A PROTECTED LOCATION. USE WATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS AND STRUCTURES. DO NOT USE A SOLID STREAM OF WATER. VIOLENT STEAM GENERATION OR ERUPTION MAY OCCUR UPON APPLICATION OF DIRECT WATER STREAM TO HOT LIQUIDS.
UNUSUAL FIRE AND EXPLOSION HAZARDS	CONTACT WITH REACTIVE METALS, E.G., ALUMINUM MAY RESULT IN THE HAZARDS GENERATION OF FLAMMABLE HYDROGEN GAS, SODIUM HYDROXIDE MAY REACT WITH WATER.
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. NITROGEN OXIDES.

SECTION 06: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES	EVACUATE AREA. CLEAR NON-EMERGENCY PERSONNEL FROM AREA. ALWAYS WEAR RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT. VENTILATE AREA OF LEAK OR SPILL. CONTAIN MATERIAL TO PREVENT CONTAMINATION OF SOIL, SURFACE WATER OR GROUND WATER. DIKE SPILLS IMMEDIATELY. PREVENT CONTAMINATION OF SOIL, SURFACE OF WATER OR GROUND WATER. LARGE SPILLS: PREVENT CONTAMINATION OF WATERWAYS. DIKE AND PUMP INTO SUITABLE CONTAINERS. CLEAN UP RESIDUAL WITH ABSORBENT MATERIAL, PLACE IN APPROPRIATE CONTAINER AND FLUSH WITH WATER.
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SECTION 07: HANDLING AND STORAGE

HANDLING PROCEDURES AND EQUIPMENT	FOR INDUSTRIAL USE ONLY. CORROSIVE. KEEP AWAY FROM HEAT, SPARKS AND FLAME. CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED, CAN CONTAIN VAPOURS. DO NOT CUT, DRILL, GRIND, AND WELD OR PERFORM SIMILAR OPERATIONS ON OR NEAR CONTAINERS. AVOID BREATHING MIST OR VAPOUR. AVOID CONTACT WITH EYES, EQUIPMENT SKIN, AND CLOTHING. DO NOT TAKE INTERNALLY. USE WITH ADEQUATE VENTILATION. WEAR PROTECTIVE EQUIPMENT DURING HANDLING. KEEP THE CONTAINERS CLOSED WHEN NOT IN USE. PROTECT AGAINST PHYSICAL DAMAGE. EMPTY CONTAINERS MAY CONTAIN HAZARDOUS PRODUCT RESIDUES.
STORAGE REQUIREMENTS	STORE IN A COOL, DRY, WELL-VENTILATED AREA, AWAY FROM HEAT AND IGNITION SOURCES. PLACE AWAY FROM INCOMPATIBLE MATERIALS. INCOMPATIBLE MATERIALS FOR PACKAGING: ALUMINUM, ZINC, TIN, WOOD, PAPER. INCOMPATIBLE MATERIALS FOR STORAGE OR TRANSPORT: ACIDS, NITROGEN CONTAINING ORGANICS, PHOSPHOROUS, EXPLOSIVES, ORGANIC PEROXIDES, ALUMINUM, ZINC, TIN, HALOGENATED HYDROCARBONS.

SECTION 08: EXPOSURE CONTROLS AND PERSONAL PROTECTION

ENGINEERING CONTROL.....	PROVIDE GENERAL AND/OR LOCAL EXHAUST VENTILATION TO CONTROL AIRBORNE LEVELS BELOW THE EXPOSURE GUIDELINES. VENTILATION FACILITIES SHOULD BE CORROSION RESISTANT.
PERSONAL PROTECTIVE EQUIPMENT:	
SKIN PROTECTION	WEAR NEOPRENE GLOVES. NITRILE. NATURAL RUBBER.
CLOTHING.....	IMPERVIOUS CLOTHING. RUBBER APRONS, PVC CLOTHING, AND PLASTIC HARD HATS SHOULD BE USED WHEN NECESSARY TO PREVENT SKIN CONTACT.
EYE/FACE PROTECTION.....	CLOSE FITTING CHEMICAL SAFETY GOGGLES WITH FACESHIELD.
RESPIRATORY PROTECTION	IF EXPOSURE EXCEEDS OCCUPATIONAL EXPOSURE LIMITS, USE AN APPROPRIATE NIOSH APPROVED RESPIRATOR. IN CASE OF SPILL OR LEAK RESULTING IN UNKNOWN CONCENTRATION, USE A NIOSH APPROVED SUPPLIED AIR RESPIRATOR.
WORK/HYGIENE PRACTICES	EMERGENCY EYE WASH AND SAFETY SHOWERS MUST BE MADE AVAILABLE IN THE IMMEDIATE WORK AREA.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE.....	LIQUID
APPEARANCE & ODOUR.....	BLUE COLOUR – CITRUS ODOUR
ODOUR THRESHOLD.....	N.AV.
SPECIFIC GRAVITY.....	~1.034
VAPOUR PRESSURE (MMHG).....	N.AV.
VAPOUR DENSITY (AIR=1).....	N.AV.
EVAPORATION RATE.....	N.AV.
BOILING POINT.....	102°C
FREEZING/MELTING POINT	-3°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.....	CONTACT WITH INCOMPATIBLE MATERIALS.
INCOMPATIBILITY (MATERIALS TO AVOID).....	ACIDS. NITROGEN CONTAINING ORGANICS. EXPLOSIVES. PHOSPHORUS. CARBOHYDRATES. ORGANIC PEROXIDES. HALOGENATED HYDROCARBONS. STRONG ACIDS, STRONG BASES, STRONG OXIDIZERS.
HAZARDOUS DECOMPOSITION PRODUCT.....	CONTACT WITH CARBOHYDRATES CAN PRODUCE CARBON MONOXIDE. CONTACT WITH ALUMINUM, ZINC, OR TIN CAN PRODUCE HYDROGEN GAS. ALDEHYDES, KETONES, ORGANIC ACIDS. SULPHUR DIOXIDE.
HAZARDOUS POLYMERIZATION	WILL NOT OCCUR.

SECTION 11: TOXICOLOGICAL INFORMATION

EXPOSURE LIMITS.....	SODIUM HYDROXIDE. ACGIH CEILING EXPOSURE LIMIT (TLV-C) 2 MG/M3; OSHA PEL 2 MG/M3; NIOSH IDLH 10 MG/M3.
LD50.....	MONOETHANOLAMINE: ACGIH – TWA: 3 ppm; ACGIH – STEL: 6 ppm. SODIUM HYDROXIDE: 300-500 MG/KG. (ORAL-RAT). HARMFUL IF SWALLOWED. >2 G/KG. (DERMAL-RABBIT). MONOETHANOLAMINE: INGESTION LD50, RAT 1,089 MG/KG; DERMAL LD50, RAT 2,504 MG/KG.
LC50.....	SODIUM XYLENE SULFONATE: ORAL LD50(RAT): > 5G/KG MONOETHANOLAMINE: INHALATION, ESTIMATED. LC50, 4 H, RAT 1.48 MG/L.
IRRITANCY OF MATERIAL	SEE SECTION 2.
SENSITIZATION TO PRODUCT	N.AV.
CARCINOGENICITY.....	SODIUM HYDROXIDE IS NOT KNOWN OR REPORTED TO BE CARCINOGENIC BY ANY REFERENCE SOURCE INCLUDING IARC, OSHA, NTP OR EPA. INGESTION OF MASSIVE DOSES OF SODIUM HYDROXIDE HAS LED TO THE DEVELOPMENT OF TUMORS OF THE ESOPHAGUS. THE RELEVANCE OF THESE FINDINGS TO CANCER IS UNKNOWN DUE TO REPEATED TISSUE DESTRUCTION AND SCAR FORMATION AS A RESULT OF THE CORROSIVE NATURE OF SODIUM HYDROXIDE.

	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	N.AV.
TERATOGENICITY	N.AV.
MUTAGENICITY	SODIUM HYDROXIDE HAS BEEN TESTED AND WAS FOUND TO BE NON-MUTAGENIC IN THE AMES ASSYS, A BACTERIAL DNA-REPAIR TEST AND IN THE SYRIAN HAMSTER EMBRYO (SA7/SHE) CELL TRANSFORMATION ASSAY.
DEVELOPMENTAL TOXICITY	N.AV.
TOXICOLOGICAL SYNERGISTIC PRODUCTS.....	N.AV.
SIGNIFICANT DATA WITH POSSIBLE RELEVANCE TO HUMANS	N.AV.
CHRONIC TOXICITY	SEE SECTION 2.

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION N.AV.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL..... IN ACCORDANCE WITH MUNICIPAL, PROVINCIAL AND FEDERAL REGULATIONS.

SECTION 14: TRANSPORT INFORMATION

PROPER SHIPPING NAME.....	CORROSIVE LIQUIDS, N.O.S. (SODIUM HYDROXIDE)
TDG CLASSIFICATION	8
UN NUMBER	1760
PACKGING GROUP	II

SECTION 15: REGULATORY INFORMATION

WHMIS CLASSIFICATION	D1A, 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
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N.AV. = NOT AVAILABLE
N.AP. = NOT APPLICABLE