SAFETY DATA SHEET

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	ACTIVE
PRODUCT USE	QUATERNARY CLEANER
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.
INGESTION	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.
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	1 - 5	SEE SECTION 11	SEE SECTION 11	SEE SECTION 11
SILICIC ACID, DISODIUM SALT; DISODIUM TRIOXOSILICATE; SODIUM METASILICATE	6834-92-0	3 - 7	SEE SECTION 11	N.AV.	N.AV.
ALCOHOLS, C9-11, ETHOXYLATED	68439-46-3	3 - 10	SEE SECTION 11	SEE SECTION 11	SEE SECTION 11
QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C12-16-ALKYLDIMETHYL, CHLORIDES	68424-85-1	< 4	N.AV.	SEE SECTION 11	SEE SECTION 11

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 WIYH 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.....	N.AV.

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.....	N.AP.
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. INCOMPLETE COMBUSTION MAY FORM CARBON MONOXIDE. BURNING PRODUCES NOXIOUS AND TOXIC FUMES.
EXPLOSION DATA.....	N.AV.
SENSITIVITY TO MECHANICAL IMPACT	N.AV.
SENSITIVITY TO STATIC DISCHARGE	N.AV.
HAZARDOUS COMBUSTION PRODUCTS	SEE HAZARDOUS DECOMPOSITION PRODUCTS.

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. CAREFULLY FLUSH SMALL SPILLS OF CAUSTIC SODA SOLUTION WITH WATER. CONTAIN LIQUID TO 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.

SECTION 07: HANDLING AND STORAGE

HANDLING PROCEDURES AND EQUIPMENT.....	FOR INDUSTRIAL USE ONLY. CORROSIVE. 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.....	GREEN COLOUR – CITRUS ODOUR
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^{o}C
FREEZING/MELTING POINT	0^{o}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. REACTIVE METALS (E.G. SODIUM, CALCIUM, ZINC ETC.). MATERIALS REACTIVE WITH HYDROXYL COMPOUNDS. COPPER ALLOYS STRONG ACIDS. OXIDIZING AGENTS. STRONG OXIDIZERS. STRONG BASES. ALKALI METALS. ORGANIC ACIDS. METALLIC NITRATES. OXIDES OF SULFUR. FLAMMABLE

	HYDROGEN GAS MAY BE PRODUCED ON CONTACT WITH ALUMINIUM, TIN, LEAD, AND ZINC.
HAZARDOUS DECOMPOSITION PRODUCT.....	CONTACT WITH CARBOHYDRATES CAN PRODUCE CARBON MONOXIDE. CONTACT WITH ALUMINUM, ZINC, OR TIN CAN PRODUCE HYDROGEN GAS. CARBON MONOXIDE. CARBON DIOXIDE (CO_2). ALDEHYDES. FLAMMABLE HYDROCARBON FRAGMENTS. HYDROGEN. NITROGEN OXIDES (NOX), HYDROGEN CHLORIDE GAS.
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.....	SODIUM HYDROXIDE: 300-500 MG/KG. (ORAL-RAT). HARMFUL IF SWALLOWED. >2 G/KG. (DERMAL-RABBIT). ALCOHOLS, C9-11, ETHOXYLATED: > 2,000 MG/KG (ORAL, RAT). 300 MG/KG (DERMAL, RAT). N-ALKYL(C12-16)-N,N-DIMETHYL-N-BENZYLAMMONIUM CHLORIDE (CAS-NO.: 68424-85-1) - ACUTE ORAL TOXICITY: LD50 RAT, DOSE: CA. 344 MG/KG; ACUTE DERMAL TOXICITY: LD50 RABBIT, DOSE: CA. 3 340 MG/KG.
LC50.....	N.AV.
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 DESTRACTION AND SCAR FORMATION AS A RESULT OF THE CORROSIVE NATURE OF SODIUM HYDROXIDE.
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.
TOXICOLOGICAL SYNERGISTIC PRODUCTS.....	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	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.AV. = NOT AVAILABLE
N.AP. = NOT APPLICABLE