



MURSATT CHEMICALS LIMITED
11 REGALCREST COURT
WOODBIDGE; ONTARIO, CANADA; L4L 8P3
(905)-850-8444

PRODUCT: LITE-SHOCK

CODE: MUR0028

Section 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER/SUPPLIER..... MURSATT CHEMICALS LIMITED
11 REGALCREST COURT
WOODBIDGE, ONTARIO
CANADA
L4L 8P3
PREPARED BY..... REGULATORY AFFAIRS
PREPARATION DATE..... May25/11
PRODUCT NAME..... LITE-SHOCK
PRODUCT CODE..... MUR0028
CHEMICAL FORMULA..... MIXTURE.
MOLECULAR WEIGHT..... MIXTURE.
CHEMICAL FAMILY..... MIXTURE.
MATERIAL USE..... WATER TREATMENT.
EMERGENCY PHONE NO..... CANUTEC (613)-996-6666.

Section 02: HAZARDS IDENTIFICATION

ROUTE OF ENTRY:
SKIN CONTACT..... NON-CORROSIVE, CORROSITEX IN-VITRO SKIN CORROSION (34.6 WT% LITHIUM HYPOCHLORITE).
SKIN ABSORPTION..... DERMAL LD50: LITHIUM HYPOCHLORITE FORMULATION: 8100 MG/KG (RABBIT).
EYE CONTACT..... LITHIUM HYPOCHLORITE FORMULATION: SEVERELY IRRITATING (RABBIT).
INHALATION..... INHALATION LC50: LITHIUM HYPOCHLORITE FORMULATION: 2.0 MG/L (RAT).
INGESTION..... ORAL LD50: LITHIUM HYPOCHLORITE FORMULATION: 555 MG/KG (RAT).
EFFECTS OF ACUTE EXPOSURE..... THIS PRODUCT IS SEVERELY IRRITATING/CORROSIVE TO THE EYES (MAY CAUSE BLINDNESS), SKIN, RESPIRATORY TRACT, AND MUCOUS MEMBRANES.
EFFECTS OF CHRONIC EXPOSURE..... CONTINUOUS INHALATION EXPOSURE MAY CAUSE LUNG DAMAGE.

Section 03: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	%	Exposure Limit	C.A.S.#	LD/50, Route,Species	LC/50 Route,Species
LITHIUM HYPOCHLORITE	15-40	SEE SECTION 11	13840-33-0	SEE SECTION 11	SEE SECTION 11
SODIUM CHLORIDE	15-40	SEE SECTION 11	7647-14-5	SEE SECTION 11	SEE SECTION 11
SODIUM SULFATE	10-30	SEE SECTION 11	7757-82-6	SEE SECTION 11	SEE SECTION 11
LITHIUM CHLORIDE	1-5	SEE SECTION 11	7447-41-8	SEE SECTION 11	SEE SECTION 11
LITHIUM CARBONATE	1-5	SEE SECTION 11	554-13-2	SEE SECTION 11	SEE SECTION 11
LITHIUM CHLORATE	1-5	SEE SECTION 11	36355-96-1	SEE SECTION 11	SEE SECTION 11
LITHIUM HYDROXIDE	1-5	SEE SECTION 11	1310-65-2	SEE SECTION 11	SEE SECTION 11

Section 04: FIRST AID MEASURES

EYE CONTACT..... IMMEDIATELY FLUSH WITH WATER FOR AT LEAST 15 MINUTES, LIFTING THE UPPER AND LOWER EYELIDS INTERMITTENTLY. SEE A MEDICAL DOCTOR OR OPHTHALMOLOGIST IMMEDIATELY.
SKIN CONTACT..... IMMEDIATELY FLUSH WITH PLENTY OF WATER WHILE REMOVING CONTAMINATED CLOTHING AND/OR SHOES, AND THOROUGHLY WASH WITH SOAP AND WATER. OBTAIN IMMEDIATE MEDICAL ATTENTION. CONTACT A MEDICAL DOCTOR IF NECESSARY.
INGESTION..... RINSE MOUTH WITH WATER. DILUTE BY GIVING 1 OR 2 GLASSES OF WATER. DO NOT INDUCE VOMITING. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. SEE A MEDICAL DOCTOR IMMEDIATELY. .
INHALATION..... REMOVE TO FRESH AIR. IF BREATHING DIFFICULTY OR DISCOMFORT OCCURS AND PERSISTS, SEE A MEDICAL DOCTOR. IF BREATHING HAS STOPPED, GIVE ARTIFICIAL RESPIRATION AND SEE A MEDICAL DOCTOR IMMEDIATELY.
NOTES TO PHYSICIAN..... LITHIUM HYPOCHLORITE IS CORROSIVE TO EYES, SKIN AND MUCOUS MEMBRANES. CONSIDERATION SHOULD BE GIVEN TO CAREFUL ENDOSCOPY AS STOMACH OR ESOPHAGEAL BURNS, PERFORATIONS OR STRICTURES MAY OCCUR. CAREFUL GASTRIC LAVAGE WITH AN ENDOTRACHEAL TUBE IN PLACE SHOULD BE CONSIDERED. OBSERVATION MAY BE WARRANTED. TREATMENT IS CONTROLLED REMOVAL OF EXPOSURE WITH SYMPTOMATIC AND SUPPORTIVE CARE.

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Section 05: FIRE FIGHTING MEASURES

T.D.G. FLAM. CLASS..... NON FLAMMABLE.
 FLAMMABILITY..... NON FLAMMABLE.
 IF YES, UNDER WHICH CONDITIONS?
 EXTINGUISHING MEDIA..... USE WATER ONLY. DO NOT USE DRY CHEMICAL, CO2 OR HALON.
 SPECIAL PROCEDURES..... WEAR FULL PROTECTIVE CLOTHING AND SELF-CONTAINED BREATHING APPARATUS (SCBA) APPROVED FOR FIRE FIGHTING. THIS IS NECESSARY TO PROTECT AGAINST THE HAZARDS OF HEAT, PRODUCTS OF COMBUSTION AND OXYGEN DEFICIENCY. DO NOT BREATHE SMOKE, GASES OR VAPORS GENERATED.

FLASH POINT (C), METHOD..... N.AP.
 AUTO IGNITION TEMPERATURE..... N.AP.
 UPPER FLAMMABLE LIMIT (% BY VOL.)... N.AP.
 LOWER FLAMMABLE LIMIT (% BY VOL.)... N.AP.
 EXPLOSION DATA..... N.AP.
 EXPLOSIVE POWER..... N.AP.
 RATE OF BURNING..... N.AV.
 GENERAL HAZARDS..... OXIDIZER. CONTACT WITH EASILY OXIDIZABLE OR COMBUSTIBLE MATERIALS CAN CAUSE FIRE OR EXPLOSION UPON IGNITION FROM ANY SOURCE.

SENSITIVITY TO STATIC DISCHARGE..... N.AP.
 SENSITIVITY TO IMPACT..... N.AP.
 PROPERTIES CONTRIBUTING TO STRONG OXIDIZER. CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE.
 FLAMMABILITY:
 HAZARDOUS COMBUSTION PRODUCTS.. OXYGEN AND TOXIC CHLORINE VAPORS.

Section 06: ACCIDENTAL RELEASE MEASURES

LEAK/SPILL..... KEEP COMBUSTIBLES (WOOD, PAPER, OIL ETC.) AWAY FROM SPILLED MATERIAL. WITH CLEAN SHOVEL, PLACE INTO CLEAN DRY CONTAINER, AND COVER LOOSELY. DISPOSE OF WASTE ACCORDING TO LOCAL AND FEDERAL LAWS AND REGULATIONS. BEFORE CLEANUP MEASURES BEGIN, REVIEW THE ENTIRE MSDS WITH PARTICULAR ATTENTION TO SECTION 3, EMERGENCY OVERVIEW AND POTENTIAL HEALTH EFFECTS; AND SECTION 8, RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT.

Section 07: HANDLING AND STORAGE

HANDLING PROCEDURES AND DO NOT GET IN EYES, ON SKIN OR CLOTHING. AVOID BREATHING DUST. WASH EQUIPMENT THOROUGHLY AFTER HANDLING.
 STORAGE NEEDS..... STORE AWAY FROM READILY OXIDIZABLE MATERIALS, STRONG ACIDS AND FLAMMABLE MATERIALS. PROTECT FROM MOISTURE. KEEP CONTAINER CLOSED.

Section 08: EXPOSURE CONTROLS AND PERSONAL PROTECTION

GLOVES/ TYPE..... RUBBER GLOVES.
 RESPIRATORY/TYPE..... WHEN ADEQUATE VENTILATION IS NOT AVAILABLE, WEAR A NIOSH/MSHA RESPIRATOR APPROVED FOR PROTECTION AGAINST INORGANIC AND HYPOCHLORITE DUSTS.

EYE/TYPE..... SAFETY GLASSES OR GOGGLES.
 FOOTWEAR/TYPE..... WORK BOOTS.
 CLOTHING/TYPE..... NORMAL WORK CLOTHES.
 OTHER/TYPE..... N.AV.
 ENGINEERING CONTROLS..... USE LOCAL EXHAUST VENTILATION TO KEEP AIRBORNE CONCENTRATIONS BELOW EXPOSURE LIMITS.
 WORK HYGIENIC PRACTICES..... QUICK-DRENCH EYEWASH AND SAFETY SHOWER.

Section 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE..... WHITE, GRANULAR SOLID.
 ODOUR..... BURNING, CHLORINE-LIKE ODOR.
 ODOUR THRESHOLD..... N.AV.
 VAPOUR PRESSURE (MMHG)..... N.AP.
 VAPOUR DENSITY (AIR=1)
 BY VOLUME..... N.AP.
 BY WEIGHT..... N.AP.
 EVAPORATION RATE..... N.AP.
 BOILING POINT..... N.AP.
 DECOMPOSITION TEMPERATURE..... DECOMPOSES @ 135 (C) OR 275 (F).
 PH..... (1% SOLUTION) @ 25°C: 11.
 SPECIFIC GRAVITY (WATER=1)..... 0.9 TO 1.0 G/CC.
 SOLUBILITY IN WATER (% W/W)..... 43 % BY WT. @ 25°C (77°F).
 COEFFICIENT OF WATER/OIL DIST..... N.AP.

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Section 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY:

YES..... STABLE AT ROOM TEMPERATURE.

NO, WHICH CONDITIONS?

CONDITIONS TO AVOID..... CONTACT WITH COMBUSTIBLE MATERIALS (WOOD, PAPER, OIL). CONTAMINATION WITH MOISTURE.

COMPATABILITY WITH OTHER SUBSTANCES:

YES
NO, WHICH ONES?..... ACIDS, OXIDIZABLE MATERIALS, COMBUSTIBLE MATERIALS.

REACTIVITY CONDITIONS:..... CONTACT WITH INCOMPATIBLES.

HAZARDOUS PRODUCTS OF OXYGEN, LITHIUM HYDROXIDE, LITHIUM CHLORATES.

DECOMPOSITION

HAZARDOUS POLYMERIZATION..... DOES NOT OCCUR.

Section 11: TOXICOLOGICAL INFORMATION

EXPOSURE LIMIT OF MATERIAL

LC 50 OF MATERIAL, SPECIES & ROUTE.. SEE SECTION 02.

LD 50 OF MATERIAL, SPECIES & ROUTE.. SEE SECTION 02.

CARCINOGENICITY OF MATERIAL..... EH40: NOT LISTED. IARC: NOT LISTED. NTP: NOT LISTED. OSHA: NOT CONSIDERED A CARCINOGEN UNDER OSHA. ACGIH: NOT LISTED.

REPRODUCTIVE EFFECTS..... THIS PRODUCT WAS NOT MUTAGENIC OR GENOTOXIC IN SEVERAL IN VITRO TESTS.

IRRITANCY OF MATERIAL..... SEE SECTION 03.

SENSITIZING CAPABILITY OF MATERIAL. NON-SENSITIZING (GUINEA PIG).

SYNERGISTIC MATERIALS..... N.AV.

MUTAGENICITY..... THIS PRODUCT WAS NOT MUTAGENIC OR GENOTOXIC IN SEVERAL IN-VITRO TESTS.

TERATOGENICITY..... N.AV.

Section 12: ECOLOGICAL CONSIDERATIONS

ECOTOXICOLOGICAL INFORMATION..... MALLARD DUCK: ACUTE ORAL LD50 = 1,960 MG/KG [FMC I87-0992]; 5 DAY DIETARY LC50>17,240 PPM (NO DEATHS AT MAXIMUM DOSE). BOBWHITE QUAIL: 5 DAY DIETARY LC50 >17,240 PPM. RAINBOW TROUT: 96 HOUR LC50 0.69 MG/L. BLUEGILL: 96 HOUR LC50 = 0.97 MG/L. DAPHNIA: 48 HOUR LC50 = 0.37 ?G/L.

Section 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL..... DISPOSE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.

Section 14: TRANSPORT INFORMATION

TDG CLASSIFICATION..... 5.1.

PROPER SHIPPING NAME..... OXIDIZING SOLID, N. O. S. (LITHIUM HYPOCHLORITE, MIXTURE).

UN NUMBER..... 1479.

PACKING GROUP..... III.

SPECIAL SHIPPING INSTRUCTIONS..... NO SPECIAL SHIPPING REQUIREMENTS.

Section 15: REGULATORY INFORMATION

WHMIS CLASSIFICATION..... C, E.

CPR COMPLIANCE..... THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

Section 16: OTHER INFORMATION

N.AP.=NOT APPLICABLE

N.AV.=NOT AVAILABLE

OTHER INFORMATION..... THE DATA IN THIS MSDS RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED HEREIN AND DOES NOT RELATE TO USE IN COMBINATION WITH ANY OTHER MATERIAL OR IN ANY PROCESS. THIS DATA IS OFFERED IN GOOD FAITH AS TYPICAL VALUES AND NOT AS PRODUCT SPECIFICATIONS. NO WARRANTY, EITHER EXPRESSED OR IMPLIED, IS HEREBY MADE. THE RECOMMENDED INDUSTRIAL HYGIENE AND SAFE HANDLING PROCEDURES ARE BELIEVED TO BE GENERALLY APPLICABLE. HOWEVER, EACH USER SHOULD REVIEW THESE RECOMMENDATIONS IN THE SPECIFIC CONTEXT OF THE INTENDED USE AND DETERMINE WHETHER THEY ARE APPROPRIATE.