SAFETY DATA SHEET

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

PRODUCT: GEN-R-8 SHOCK

SECTION 01: IDENTIFICATION

PRODUCT CODE PRODUCT IDENTIFIER OTHER MEANS OF IDENTIFICATION RECOMMENDED USE AND	N.AV. FORMULATION AND CHEMICAL SYNTHESIS IN INDUSTRIAL MANUFACTURING
RESTRICTIONS ON USE	OPERATIONS; ADDITIVE FOR PREPARATIONS AND ARTICLES FOR INDUSTRIAL AND CONSUMER USE. DO NOT USE FOR PRIVATE PURPOSES (HOUSEHOLD).
SUPPLIER IDENTIFIER	MURSATT CHEMICALS LIMITED 11 REGALCREST COURT WOODBRIDGE, ONTARIO CANADA
EMERGENCY PHONE NO	L4L 8P3 CANUTEC (613)-996-6666.

SECTION 02: HAZARD IDENTIFICATION



HAZARD CLASSIFICATION	OXIDIZING SOLIDS - CATEGORY 3. SKIN CORROSION - CATEGORY 1B. SERIOUS EYE DAMAGE - CATEGORY 1. ACUTE AQUATIC TOXICITY - CATEGORY 1.
SIGNAL WORD	DANGER.
HAZARD STATEMENT.	H272 MAY INTENSIFY FIRE; OXIDIZER. H314 CAUSES SEVERE SKIN BURNS AND EYE DAMAGE. H400 VERY TOXIC TO AQUATIC LIFE.
PRECAUTIONARY STATEMENT	
FRECAUTIONART STATEMENT	SMOKING. P221 TAKE ANY PRECAUTION TO AVOID MIXING WITH
	COMBUSTIBLES P220 KEEP/STORE AWAY FROM CLOTHING/COMBUSTIBLE
	MATERIALS. P260 DO NOT BREATHE DUST/FUME/GAS/MIST/VAPOURS/SPRAY.
	P264 WASH SKIN THOROUGHLY AFTER HANDLING. P280 WEAR PROTECTIVE
	GLOVES/PROTECTIVE CLOTHING/EYE PROTECTION/FACE PROTECTION.
	P301+P330+P331 IF SWALLOWED: RINSE MOUTH. DO NOT INDUCE VOMITING. P310
	IMMEDIATELY CALL A POISON CENTER OR DOCTOR/PHYSICIAN. P303+P361+P353
	IF ON SKIN (OR HAIR): REMOVE/TAKE OFF IMMEDIATELY ALL CONTAMINATED
	CLOTHING. RINSE SKIN WITH WATER/SHOWER. P305+P351+P338 IF IN EYES:
	RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT
	LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING. P304+P340 IF
	INHALED: REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A POSITION
	COMFORTABLE FOR BREATHING. P363 WASH CONTAMINATED CLOTHING
	BEFORE REUSE. P370+P378 IN CASE OF FIRE: USE ONLY WATER FOR
	EXTINCTION. P405 STORE LOCKED UP. P501 DISPOSE OF CONTENTS/CONTAINER
	TO APPROPRIATE WASTE SITE OR RECLAIMER IN ACCORDANCE WITH LOCAL
	AND NATIONAL REGULATIONS.
OTHER HAZARDS	NONE.

OTHER HAZARDS..... NONE.

SECTION 03: COMPOSITION/INFORMATION ON INGREDIENTS			
HAZARDOUS INGREDIENTS	CAS #	WT. %	
LITHIUM HYPOCHLORITE	13840-33-0	15-40	
SODIUM CHLORIDE	7647-14-5	15-40	
SODIUM SULFATE	7757-82-6	10-30	
LITHIUM CHLORIDE	7447-41-8	1-5	
LITHIUM CARBONATE	554-13-2	1-5	
LITHIUM CHLORATE	36355-96-1	1-5	
LITHIUM HYDROXIDE	1310-65-2	1-5	

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SECTION 04: FIRST AID MEASURES DESCRIPTION OF FIRST AID MEASURES: EYE CONTACT..... HOLD EYELIDS OPEN AND RINSE SLOWLY AND GENTLY WITH A STREAM OF WATER FOR 15 MINUTES. REMOVE CONTACT LENSES, IF PRESENT, AFTER THE FIRST 5 MINUTES, THEN CONTINUE TO RINSE THE EYE. CALL A PHYSICIAN OR POISON CONTROL CENTER FOR TREATMENT ADVICE. TAKE OFF CONTAMINATED CLOTHING, RINSE SKIN IMMEDIATELY WITH PLENTY OF WATER FOR 15-20 MINUTES. WASH WITH PLENTY OF SOAP AND WATER. CALL A PHYSICIAN OR POISON CONTROL CENTER FOR TREATMENT ADVICE. SKIN CONTACT..... REMOVE PERSON TO FRESH AIR. IF NOT BREATHING, CALL 911 OR AMBULANCE INHALATION..... AND THEN GIVE ARTIFICIAL RESPIRATION, PREFERABLY MOUTH-TO-MOUTH, IF POSSIBLE. CALL A PHYSICIAN OR POISON CONTROL CENTER FOR TREATMENT ADVICE IMMEDIATELY CALL A PHYSICIAN OR POISON CONTROL CENTER FOR INGESTION..... TREATMENT ADVICE. DO NOT INDUCE VOMITING UNLESS INSTRUCTED BY PHYSICIAN OR POISON CONTROL CENTER. PROMPTLY DRINK LARGE QUANTITIES OF WATER IF ABLE TO SWALLOW. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. AVOID ALCOHOL. THIS PRODUCT IS CORROSIVE. MOST IMPORTANT SYMPTOMS AND EFFECTS, ACUTE OR DELAYED: ATTENTION OF ANY IMMEDIATE MEDICAL NOTES TO MEDICAL DOCTOR: LITHIUM HYPOCHLORITE IS CORROSIVE TO EYES, ATTENTION AND SPECIAL TREATMENT SKIN AND MUCOUS MEMBRANES WITH CHEMICAL BURNS (CAUSTIC). TREATMENT IS DILUTION/FLUSHING OF SITE WITH COPIOUS AMOUNTS OF WATER NEEDED WITH CONTROLLED REMOVAL OF EXPOSURE FOLLOWED BY SYMPTOMATIC AND SUPPORTIVE CARE TO MAINTAIN LIFE FUNCTIONS. CONSIDERATION SHOULD BE GIVEN TO CAREFUL ENDOSCOPY AS STOMACH OR ESOPHAGEAL BURNS, PERFORATIONS OR STRICTURES MAY OCCUR. PROBABLE MUCOSAL DAMAGE MAY CONTRAINDICATE THE USE OF GASTRIC LAVAGE. CAREFUL GASTRIC LAVAGE WITH AN ENDOTRACHEAL TUBE IN PLACE SHOULD BE CONSIDERED. **OBSERVATION MAY BE WARRANTED..** SECTION 05: FIRE FIGHTING MEASURES SUITABLE EXTINGUISHING MEDIA..... USE WATER ONLY. DO NOT USE DRY CHEMICAL, CO2 OR HALON. STRONG OXIDIZER. CONTACT WITH EASILY OXIDIZABLE OR COMBUSTIBLE UNSUITABLE EXTINGUISHING MEDIA SPECIAL HAZARDS ARISING FROM THE PRODUCT: MATERIALS CAN CAUSE FIRE OR EXPLOSION UPON IGNITION FROM ANY SOURCE. OXYGEN AND TOXIC CHLORINE VAPORS. CORROSIVE LITHIUM HYDROXIDE DUST. WEAR FULL PROTECTIVE CLOTHING AND SELF-CONTAINED BREATHING HAZARDOUS COMBUSTION PRODUCTS. SPECIAL PROTECTIVE EQUIPMENT AND APPARATUS (SCBA) APPROVED FOR FIRE FIGHTING. THIS IS NECESSARY TO PROTECT AGAINST THE HAZARDS OF HEAT, PRODUCTS OF COMBUSTION AND PRECAUTIONS FOR FIRE-FIGHTERS: OXYGEN DEFICIENCY. DO NOT BREATHE SMOKE, GASES OR VAPORS GENERATED. SECTION 06: ACCIDENTAL RELEASE MEASURES BEFORE CLEANUP MEASURES BEGIN, REVIEW THE ENTIRE SDS WITH PARTICULAR ATTENTION TO SECTION 2, HAZARDS IDENTIFICATION; AND PERSONAL PRECAUTIONS..... SECTION 8, EXPOSURE CONTROLS/PERSONAL PROTECTION. ENVIRONMENTAL PRECAUTIONS..... DO NOT WASH INTO DRAINS. DISPOSE OF AT QUALIFIED WASTE DISPOSAL FACILITY METHODS AND MATERIALS FOR KEEP COMBUSTIBLES (WOOD, PAPER, OIL ETC.) AWAY FROM SPILLED MATERIAL. WITH CLEAN SHOVEL, PLACE INTO CLEAN DRY CONTAINER, AND COVER CONTAINMENT AND CLEANING UP LOOSELY. SECTION 07: HANDLING AND STORAGE DO NOT GET IN EYES, ON SKIN OR CLOTHING. AVOID BREATHING DUST. WASH PRECAUTIONS FOR SAFE HANDLING:..... THOROUGHLY AFTER HANDLING. STORE AWAY FROM READILY OXIDIZABLE MATERIALS, STRONG ACIDS AND CONDITIONS FOR SAFE STORAGE. INCLUDING ANY IMCOMPATIBILITES: FLAMMABLE MATERIALS. PROTECT FROM MOISTURE. KEEP CONTAINER CLOSED. SECTION 08: EXPOSURE CONTROLS AND PERSONAL PROTECTION

INGREDIENTS	TWA	ACGIH TLV STEL	PEL	OSHA PEL STEL	NIOSH REL
LITHIUM HYPOCHLORITE	N.AV.	N.AV.	N.AV.	N.AV.	N.AV.

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SECTION 08: EXPOSURE CONTROLS AND PERSONAL PROTECTION

INGREDIENTS	TWA	GIH TLV STEL	OSH PEL	IA PEL STEL	NIOSH REL
SODIUM CHLORIDE	N.AV.	N.AV.	N.AV.	N.AV.	N.AV.
SODIUM SULFATE	N.AV.	N.AV.	N.AV.	N.AV.	N.AV.
LITHIUM CHLORIDE	N.AV.	N.AV.	N.AV.	N.AV.	N.AV.
LITHIUM CARBONATE	N.AV.	N.AV.	N.AV.	N.AV.	N.AV.
LITHIUM CHLORATE	N.AV.	N.AV.	N.AV.	N.AV.	N.AV.
LITHIUM HYDROXIDE	N.AV.	N.AV.	N.AV.	N.AV.	N.AV.
APPROPRIATE ENGINEERING CONTROLS USE LOCAL EXHAUST VENTILATION TO KEEP AIRBORNE CONCENTRATIONS BELOW EXPOSURE LIMITS.					
INDIVIDUAL PROTECT SUCH AS PERSONAL EQUIPMENTS:					
HAND PROTECTION		GLOVE RECOMMEND FOR GLOVE SELECTI PERFORMANCE FRO FACTORS SUCH AS C AND GLOVE REUSE, I REQUIREMENTS, SUC	ATIONS SHOULD N ON. ACTUAL IN-US M THE CONTROLLI CONCENTRATION A MAY AFFECT PERF CH AS LENGTH, DE ICE, OR GLOVE GR	THROUGH TIME >480 IOT BE USED AS THE E CONDITIONS MAY V ED CONDITIONS OF LA ND TEMPERATURE, G ORMANCE. OTHER GI XTERITY, CUT, ABRAS IP NEED TO BE CONS	ABSOLUTE BASIS ARY GLOVE ABORATORY TESTS. GLOVE THICKNESS OVE OVE SION, PUNCTURE
RESPIRATORY PRO	TECTION	APPROVED FOR PRO	TECTION AGAINST	IOT ADEQUATE, WEAF INORGANIC DUSTS. S IOSH OR MSHA APPRO	SEE EXPOSURE
EYE PROTECTION PROTECTIVE CLOTH PROTECTIVE FOOT\ OTHER	HNG VEAR	IMPERVIOUS PROTECT IMPERVIOUS FOOTW	CTIVE CLOTHING. EAR.	OWER SHOULD BE LOO	CATED IN IMMEDIATE
HYGIENIC PRACTICES	S	DRINKING, OR SMOK	ING, OR USING TO	TICES. WASH HANDS E LET FACILITIES. PROM THOROUGHLY BEFOR	MPTLY REMOVE

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE COLOR ODOUR PH MELTING/FREEZING POINT BOILING POINT FLASH POINT (C), METHOD EVAPORATION RATE FLAMMABILITY (SOLIDS AND GASES) UPPER FLAMMABLE LIMIT (% BY VOL.) LOWER FLAMMABLE LIMIT (% BY VOL.)	WHITE. BURNING, CHLORINE-LIKE ODOR. (1% SOLUTION) @ 25°C: 11. DECOMPOSES @ 135°C (275°F). N.AP. N.AP. N.AP. OXIDIZER. PROMOTES COMBUSTION. CONTACT WITH COMBUSTIBLE MATERIALS MAY CAUSE FIRE. N.AP.
VAPOUR PRESSURE (MMHG) VAPOUR DENSITY (AIR=1)	
APOON DENSITY (AIRET) RELATIVE DENSITY SOLUBILITY IN WATER (% W/W) COEFFICIENT OF WATER/OIL DIST AUTO IGNITION TEMPERATURE DECOMPOSITION TEMPERATURE VISCOSITY	N.AP. N.AP.

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY:	•••
CHEMICAL STABILITY: POSSIBILITY OF HAZARDOUS REACTIONS:	

 OXIDIZER. KEEP FROM COMBUSTIBLE MATERIALS, ACIDS AND OXIDIZABLE MATERIALS.
STABLE AT ROOM TEMPERATURE.
HAZARDOUS POLYMERIZATION WILL NOT OCCUR.

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INCOMPATIBLE MATERIALS:..... HAZARDOUS PRODUCTS OF

SECTION 10: STABILITY AND REACTIVITY

CONDITIONS TO AVOID.....

DECOMPOSITION

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

ACIDS, OXIDIZABLE MATERIALS, COMBUSTIBLE MATERIALS. OXYGEN, LITHIUM HYDROXIDE, LITHIUM CHLORATES.

SECTION 11: TOXICOLOGICAL INFORMATION

INGREDIENTS	LC50	LD50
LITHIUM HYPOCHLORITE	N.AV.	N.AV.
SODIUM CHLORIDE	N.AV.	N.AV.
SODIUM SULFATE	N.AV.	N.AV.
LITHIUM CHLORIDE	N.AV.	N.AV.
LITHIUM CARBONATE	N.AV.	N.AV.
LITHIUM CHLORATE	N.AV.	N.AV.
LITHIUM HYDROXIDE	N.AV.	N.AV.
INGESTION EFFECTS OF ACUTE EXPOSURE EFFECTS OF CHRONIC EXPOSURE SIGNS AND SYMPTOMS OF OVEREXPOSURE	CLASSIFIED AS CORROSIVE, CATEGORY 1E FORMULATION. CLASSIFIED AS CORROSIVE TO EYES ON TH FORMULATION. INHALATION LC50: LITHIUM HYPOCHLORITE N.AV. THIS PRODUCT IS SEVERELY IRRITATING/C BLINDNESS), SKIN, RESPIRATORY TRACT, A CONTINUOUS INHALATION EXPOSURE MAY	HE BASIS OF DATA FOR THE E FORMULATION: 2.0 MG/L (RAT). CORROSIVE TO THE EYES (MAY CAUSE AND MUCOUS MEMBRANES. Y CAUSE LUNG DAMAGE.
	A CARCINOGEN UNDER OSHA. ACGIH: NOT N.AV. N.AV. CLASSIFIED AS NOT A REPRODUCTIVE TOX HYPOCHLORITE. CLASSED AS NOT SENSITIZING TO SKIN ON FORMULATION.	LISTED.
SYNERGISTIC MATERIALS	N.AV.	

SECTION 12: ECOLOGICAL CONSIDERATIONS

ECOTOXICOLOGICAL INFORMATION...... LITHIUM - MALLARD DUCK: ACUTE ORAL LD50 = 1,960 MG/KG [FMC 187-0992]; 5 DAY DIETARY LC50>17,240 PPM (NO DEATHS AT MAXIMUM DOSE). FORMULATION - . 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 uG/L.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS:..... DISPOSE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.

SECTION 14: TRANSPORT INFORMATION

UN NUMBER PROPER SHIPPING NAME TDG CLASSIFICATION	1479. OXIDIZING SOLID, N. O. S. (LITHIUM HYPOCHLORITE, MIXTURE). 5.1.
PACKING GROUP	
ENVIRONMENTAL HAZARDS ACCORDING	MARINE POLLUTANT.
TO THE INTERNATIONAL MARITIME	
DANGEROUS GOODS CODE AND THE	
UNITED NATIONS MODEL REGULATIONS:	

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SECTION 14: TRANSPORT INFORMATION

SPECIAL PRECAUTIONS IN CONNECTION N.AV. WITH TRANSPORT OR CONVEYANCE EITHER WITHIN OR OUTSIDE THE PREMISES:

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SECTION 15: REGULATORY INFORMATION

SAFETY, HEALTH AND ENVIRONMENTAL N.AV. REGULATIONS SPECIFIC TO THE PRODUCT:

SECTION 16: OTHER INFORMATION

N.AV.=NOT AVAILABLE
N.AP.=NOT APPLICABLETHE 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 THET ARE APPROPRIATE.
REGULATORY AFFAIRS
APR 18/2017