



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

PRODUCT: SHOXITE

CODE: MUR0029

**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..... Jun01/08  
PRODUCT NAME..... SHOXITE  
PRODUCT CODE..... MUR0029  
CHEMICAL FORMULA..... MIXTURE.  
MOLECULAR WEIGHT..... MIXTURE.  
CHEMICAL FAMILY..... POTASSIUM HYDROGEN PEROXYMONOSULFATE.  
MATERIAL USE..... N.AV.  
EMERGENCY PHONE NO..... CANUTEC (613)-996-6666.

**Section 02: COMPOSITION/INFORMATION ON INGREDIENTS**

Hazardous Ingredients	%	Exposure Limit	C.A.S.#	LD/50, Route, Species	LC/50 Route, Species
POTASSIUM PEROXYMONOSULFATE	30-60	N.AV.	10058-23-8	N.AV.	N.AV.
POTASSIUM BISULFATE	10-30	N.AV.	7646-93-7	N.AV.	N.AV.
POTASSIUM SULFATE	15-40	N.AV.	7778-80-5	N.AV.	N.AV.
POTASSIUM PEROXYDISULFATE	1-5	N.AV.	7727-21-1	N.AV.	N.AV.
MAGNESIUM CARBONATE	1-5	N.AV.	546-93-0	N.AV.	N.AV.

**Section 03: HAZARDS IDENTIFICATION**

ROUTE OF ENTRY:  
SKIN CONTACT..... SKIN CONTACT WITH AQUEOUS SOLUTIONS OR THE DRY POWDER UPON CONTACT WITH MOISTURE OR PERSPIRATION MAY CAUSE SKIN BURNS OR ULCERATION; TEMPORARY BODY HAIR LOSS MAY OCCUR IN CONTACTED AREAS. SKIN CONTACT WITH THE PRODUCT MAY CAUSE ALLERGIC SKIN REACTIONS IN SENSITIVE INDIVIDUALS. HUMAN PATCH TESTS WITH THE PRODUCT DILUTED IN WATER AT CONCENTRATIONS UP TO 150 PPM DID NOT CAUSE ALLERGIC SKIN REACTION.

SKIN ABSORPTION..... N.AV.

EYE CONTACT..... EYE CONTACT MAY CAUSE EYE CORROSION OR ULCERATION. SEVERE EYE DAMAGE MAY RESULT IF NOT IMMEDIATELY TREATED (SEE FIRST AID MEASURES).

INHALATION..... INHALATION MAY CAUSE NOSE BLEEDS AND IRRITATION OF THE UPPER RESPIRATORY PASSAGES WITH COUGHING AND DISCOMFORT.

INGESTION..... INGESTION MAY CAUSE GASTRITIS POSSIBLY PROGRESSING TO NECROSIS OR HEMORRHAGE.

EFFECTS OF ACUTE EXPOSURE..... POTASSIUM MONOPERSULFATE IS A SKIN AND EYE CORROSIVE, AND A NOSE AND THROAT IRRITANT. MAY CAUSE ALLERGIC SKIN REACTIONS IN SENSITIVE INDIVIDUALS. INGESTION MAY CAUSE INFLAMMATION AND DAMAGE TO THE LINING OF THE STOMACH, RESULTING IN BLEEDING. INDIVIDUALS WITH PREEXISTING DISEASES OF THE SKIN OR GASTROINTESTINAL TRACT MAY HAVE INCREASED SUSCEPTIBILITY TO THE TOXICITY OF EXCESSIVE EXPOSURES.

EFFECTS OF CHRONIC EXPOSURE..... ADMINISTRATION OF LARGE SINGLE INGESTION DOSES OF POTASSIUM MONOPERSULFATE PRODUCED NONSPECIFIC EFFECTS SUCH AS WEIGHT LOSS AND IRRITATION, AS WELL AS GASTRIC ULCERATION, NECROSIS AND HEMORRHAGE. REPEATED ADMINISTRATION OF POTASSIUM MONOPERSULFATE AT A COMBINED DOSAGE OF 1000/600 MG/KG FOR 13 WEEKS CAUSED PATHOLOGICAL CHANGES OF THE STOMACH, BODY WEIGHT LOSS, GASPING, NOISY RESPIRATION, AND HUNCHED POSTURE. THERE WERE NO TOXIC EFFECTS NOTED AT 20 OR 200 MG/KG AND THE NO-OBSERVED-ADVERSE-EFFECT-LEVEL (NOAEL) IS CONSIDERED TO BE 200 MG/KG.

INHALATION, CHRONIC..... SINGLE EXPOSURES BY INHALATION TO POTASSIUM MONOPERSULFATE PRODUCED NONSPECIFIC EFFECTS SUCH AS WEIGHT LOSS AND SLIGHT RESPIRATORY IRRITATION. REPEATED INHALATION EXPOSURES PRODUCED EYE IRRITATION AND REVERSIBLE CORNEAL DAMAGE.

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**Section 04: FIRST AID MEASURES**

EYE CONTACT.....	IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. CALL A PHYSICIAN.
SKIN CONTACT.....	IN CASE OF CONTACT, IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES, WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. CALL A PHYSICIAN. WASH CONTAMINATED CLOTHING BEFORE REUSE.
INGESTION.....	IF SWALLOWED, DO NOT INDUCE VOMITING. IMMEDIATELY GIVE 2 GLASSES OF WATER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. CALL A PHYSICIAN.
INHALATION.....	IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CALL A PHYSICIAN.
NOTES TO PHYSICIAN.....	N.AV.

**Section 05: FIRE FIGHTING MEASURES**

T.D.G. FLAM. CLASS.....	NON FLAMMABLE.
FLAMMABILITY.....	NON FLAMMABLE.
IF YES, UNDER WHICH CONDITIONS?	
EXTINGUISHING MEDIA.....	WATER. DO NOT USE CARBON DIOXIDE OR OTHER GAS-FILLED FIRE EXTINGUISHERS; THEY WILL HAVE NO EFFECT ON DECOMPOSING PERSULFATES.
SPECIAL PROCEDURES.....	WILL RELEASE OXYGEN WHEN HEATED, INTENSIFYING A FIRE. ACIDIC MIST MAY BE PRESENT; SELF CONTAINED BREATHING APPARATUS SHOULD BE USED.
UNUSUAL FIRE AND EXPLOSION HAZARDS	IMPROPER STORAGE OF LARGE MASSES OF THIS PRODUCT CAN TRAP HEAT AND LEAD TO IGNITION OF COMBUSTIBLES (SEE SECTION ON "HANDLING AND STORAGE"). GRINDING OR INTENSIVE MIXING MAY CAUSE DECOMPOSITION WITH LIBERATION OF HEAT AND OXYGEN; IGNITION OF OXIDIZABLE MATERIAL IF PRESENT MAY OCCUR.
FLASH POINT (C), METHOD.....	N.AP.
AUTO IGNITION TEMPERATURE.....	N.AV.
UPPER FLAMMABLE LIMIT (% BY VOL.)....	N.AP.
LOWER FLAMMABLE LIMIT (% BY VOL.)...	N.AP.
EXPLOSION DATA.....	N.AV.
EXPLOSIVE POWER.....	N.AV.
RATE OF BURNING.....	WILL NOT BURN.
SENSITIVITY TO STATIC DISCHARGE.....	N.AV.
SENSITIVITY TO IMPACT.....	N.AV.
HAZARDOUS COMBUSTION PRODUCTS..	SEE HAZARDOUS DECOMPOSITION PRODUCTS.

**Section 06: ACCIDENTAL RELEASE MEASURES**

LEAK/SPILL.....	SAFEGUARDS (PERSONNEL) - NOTE: REVIEW FIRE FIGHTING MEASURES AND HANDLING (PERSONNEL) SECTIONS BEFORE PROCEEDING WITH CLEAN-UP. USE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT DURING CLEAN-UP. ACCIDENTAL RELEASE MEASURES: SWEEP UP SOLID. FLUSH LIQUID SPILLS WITH LOW PRESSURE WATER. (SEE DISPOSAL CONSIDERATIONS).
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**Section 07: HANDLING AND STORAGE**

HANDLING PROCEDURES AND EQUIPMENT	DO NOT INHALE. DO NOT GET IN EYES, ON SKIN OR CLOTHING. WASH THOROUGHLY AFTER HANDLING. WASH CLOTHING AFTER USE.
STORAGE NEEDS.....	STORE SOLID OXONE IN A COOL, DRY, WELL-VENTILATED AREA AWAY FROM HEAT SOURCES SUCH AS LIGHT FIXTURES OR SPACE HEATERS. REPLACE THE LID ON THE PLASTIC PAILS WHEN THEY ARE NOT IN USE TO PREVENT CONTAMINATION AND EXTEND SHELF LIFE. PALLETS OF 25 KG. BAGS CAN BE STACKED. LEAVE OPEN SPACE ON ALL SIDES OF EACH PALLET TO PROVIDE VENTILATION. SEE LOCAL FIRE CODES FOR ALLOWABLE LIMITS. BULK BAGS SHOULD BE STORED ON PALLETS; IF STACKED USE PYRAMID STYLE, NO MORE THAN 2 PALLETS HIGH. CLOSELY STACKED BAGS SHOULD NOT EXCEED A 4 FT. (1.2M) CUBE. KEEP PACKAGES DRY. DO NOT STORE WITH COMBUSTIBLE MATERIALS OR WITH INCOMPATIBLES (SEE "INCOMPATIBILITY WITH OTHER MATERIALS").

**Section 08: EXPOSURE CONTROLS/PERSONAL PROTECTION**

GLOVES/ TYPE.....	SEE BELOW.
RESPIRATORY/TYPE.....	A NIOSH APPROVED AIR-PURIFYING RESPIRATOR WITH AN APPROPRIATE PARTICULATE CARTRIDGE OR CANISTER MAY BE PERMISSIBLE UNDER CERTAIN CIRCUMSTANCES WHERE AIRBORNE CONCENTRATIONS ARE EXPECTED TO EXCEED EXPOSURE LIMITS. PROTECTION PROVIDED BY AIR-PURIFYING RESPIRATORS IS LIMITED. USE A POSITIVE PRESSURE AIR-SUPPLIED RESPIRATOR IF THERE IS ANY POTENTIAL FOR AN UNCONTROLLED RELEASE, EXPOSURE LEVELS ARE NOT KNOWN, OR ANY OTHER CIRCUMSTANCES WHERE AIR-PURIFYING RESPIRATORS MAY NOT PROVIDE ADEQUATE PROTECTION.

PRODUCT: SHOXITE

CODE: MUR0029

**Section 08: EXPOSURE CONTROLS/PERSONAL PROTECTION**

EYE/TYPE..... FOR EXPOSURE TO DRY MATERIAL: . WEAR SAFETY GLASSES OR COVERALL CHEMICAL SPLASH GOGGLES. FOR EXPOSURE TO SOLUTIONS: . WEAR COVERALL CHEMICAL SPLASH GOGGLES. ADDITIONALLY WEAR A FACE SHIELD WHERE THE POSSIBILITY EXISTS FOR FACE CONTACT DUE TO SPLASHING OR SPRAYING OF MATERIAL.

FOOTWEAR/TYPE..... SEE BELOW.

CLOTHING/TYPE..... FOR EXPOSURE TO DRY MATERIAL: . WHERE THERE IS POTENTIAL FOR SKIN CONTACT HAVE AVAILABLE AND WEAR AS APPROPRIATE IMPERVIOUS GLOVES, APRON, PANTS AND JACKET. FOR EXPOSURE TO SOLUTIONS: . WHERE THERE IS POTENTIAL FOR SKIN CONTACT, WEAR IMPERVIOUS CLOTHING SUCH AS GLOVES, APRON, BOOTS OR WHOLE BODYSUIT.

OTHER/TYPE  
ENGINEERING CONTROLS..... USE SUFFICIENT VENTILATION TO KEEP EMPLOYEE EXPOSURE BELOW RECOMMENDED LIMITS.

**Section 09: PHYSICAL AND CHEMICAL PROPERTIES**

PHYSICAL STATE..... WHITE GRANULAR FREE FLOWING SOLID.

ODOUR..... ODORLESS.

ODOUR THRESHOLD..... N.AV.

VAPOUR PRESSURE (MMHG)..... N.AP.

VAPOUR DENSITY (AIR=1)..... N.AP.

BY VOLUME

BY WEIGHT

EVAPORATION RATE..... N.AV.

BOILING POINT..... DECOMPOSES.

MELTING POINT (C)..... DECOMPOSES.

PH..... 1% SOLUTION = 2.3; 3% SOLUTION = 2.0; 10% SOLUTION = 1.6.

SPECIFIC GRAVITY (WATER=1)..... 1.1-1.4.

SOLUBILITY IN WATER (% W/W)..... 25.6 WT% @ 20 C (68 F).

COEFFICIENT OF WATER/OIL DIST..... N.AV.

**Section 10: STABILITY AND REACTIVITY**

CHEMICAL STABILITY:  
YES..... STABLE WHEN HANDLED AND STORED AS INDICATED.

NO, WHICH CONDITIONS?  
CONDITIONS TO AVOID..... CONTACT WITH ICOMPATIBLES.

COMPATABILITY WITH OTHER  
SUBSTANCES:  
YES

NO, WHICH ONES?..... THE MIXTURE OF THIS PRODUCT WITH COMPOUNDS CONTAINING HALIDES OR ACTIVE HALOGENS (BROMINE, CHLORINE, IODINE) CAN CAUSE THE RELEASE OF THE RESPECTIVE HALOGEN GAS, IF MOISTURE IS PRESENT. AVOID THESE GASES (BROMINE AND CHLORINE) BECAUSE THEY ARE VERY IRRITATING TO EYES AND LUNGS EVEN AT LOWCONCENTRATIONS. NEVER MIX CONCENTRATED OXONE(R) WITH DRY OR CONCENTRATED BROMINE-CONTAINING CHEMICALS, SUCH AS BROMATES, BROMIDES, OR ANY CONCENTRATED BROMINE POOL CHEMICALS. MIXING CONCENTRATED OXONE(R) WITH DRY OR CONCENTRATED CHLORINE-CONTAINING CHEMICALS, SUCH AS HYPOCHLORITES ("HYPO" FOR POOLS ), SODIUM DICHLOROISOCYANURATE (DICHLOR), SODIUM TRIISOCYANURATE (TRICHLOR) OR WITH SODIUM CHLORIDE (SALT), MAY CAUSE THE RELEASE OF CHLORINE GAS. MIXING WITH CYANIDES CAN CAUSE RELEASE OF HYDROGEN CYANIDE GAS. MIXING WITH HEAVY METAL SALTS SUCH AS THOSE OF COBALT, NICKEL, COPPER, OR MANGANESE CAN CAUSE DECOMPOSITION WITH RELEASE OF OXYGEN AND HEAT.

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

HAZARDOUS PRODUCTS OF ..... DECOMPOSES WHEN HEATED OR DAMPENED, RELEASING OXYGEN AND HEAT

DECOMPOSITION  
HAZARDOUS POLYMERIZATION..... WILL NOT OCCUR.

**Section 11: TOXICOLOGICAL INFORMATION**

EXPOSURE LIMIT OF MATERIAL..... PARTICULATES (NOT OTHERWISE REGULATED) 15 MG/M3, 8 HR. TWA, TOTAL DUST 5 MG/M3, 8 HR. TWA, RESPIRABLE DUST; TLV (ACGIH) : NONE ESTABLISHED; AEL \* (MANUFACTURER) : 1 MG/M3, 8 & 12 HR. TWA. POTASSIUM SULFATE - PEL (OSHA) : NONE ESTABLISHED; TLV (ACGIH) : NONE ESTABLISHED; AEL \* (MANUFACTURER) : 10 MG/M3, 8 HR. TWA. MAGNESIUM CARBONATE - PEL (OSHA) : 15 MG/M3, TOTAL DUST, 8 HR. TWA 5 MG/M3, RESPIRABLE DUST, 8 HR. TWA; AEL \* (MANUFACTURER) : NONE ESTABLISHED. \* AEL IS THE MANUFACTURER'S ACCEPTABLE EXPOSURE LIMIT. WHERE GOVERNMENTALLY IMPOSED OCCUPATIONAL EXPOSURE LIMITS WHICH ARE LOWER THAN THE AEL ARE IN EFFECT, SUCH LIMITS SHALL TAKE PRECEDENCE.

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**Section 11: TOXICOLOGICAL INFORMATION**

LC 50 OF MATERIAL, SPECIES & ROUTE.. INHALATION 4 HOUR LC50: > 5 MG/L IN RATS.  
 LD 50 OF MATERIAL, SPECIES & ROUTE.. SKIN ABSORPTION LD50: > 11,000 MG/KG IN RABBITS; ORAL LD50: 200 - 2000 MG/KG IN RATS.

CARCINOGENICITY OF MATERIAL..... NONE OF THE COMPONENTS PRESENT IN THIS MATERIAL AT CONCENTRATIONS EQUAL TO OR GREATER THAN 0.1% ARE LISTED BY IARC, NTP, OSHA OR ACGIH AS A CARCINOGEN.

REPRODUCTIVE EFFECTS..... TESTS FOR CARCINOGENIC ACTIVITY OR REPRODUCTIVE TOXICITY HAVE NOT BEEN PERFORMED. A RANGE-FINDING DEVELOPMENTAL TOXICITY STUDY SHOWED DEVELOPMENTAL EFFECTS ONLY AT EXPOSURE LEVELS PRODUCING OTHER TOXIC EFFECTS IN THE ADULT ANIMAL. POTASSIUM MONOPERSULFATE DID NOT PRODUCE GENETIC DAMAGE IN BACTERIAL CELL CULTURES. POTASSIUM MONOPERSULFATE DID PRODUCE GENETIC DAMAGE IN MAMMALIAN CELL CULTURES. IT DID NOT PRODUCE GENETIC DAMAGE IN TESTS ON ANIMALS, BUT SHOWED SOME EVIDENCE OF BONE MARROW CELL TOXICITY IN FEMALE MICE.

IRRITANCY OF MATERIAL..... SEE SECTION 03.  
 SENSITIZING CAPABILITY OF MATERIAL. N.AV.  
 SYNERGISTIC MATERIALS..... N.AV.  
 MUTAGENICITY..... N.AV.  
 TERATOGENICITY..... N.AV.

**Section 12: ECOLOGICAL CONSIDERATIONS**

ECOLOGICAL INFORMATION..... AQUATIC TOXICITY: 96 HOUR LC50 - RAINBOW TROUT: 53 MG/L; 48 HOUR EC50 - DAPHNIA MAGNA: 3.5 MG/L.

**Section 13: DISPOSAL CONSIDERATIONS**

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

**Section 14: TRANSPORT INFORMATION**

TDG CLASSIFICATION..... 8.  
 UN NUMBER..... 3260.  
 PROPER SHIPPING NAME..... CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (MONOPERSULFATE COMPOUND).  
 PACKING GROUP..... II.  
 SPECIAL SHIPPING INSTRUCTIONS..... CORROSIVE MATERIAL.

**Section 15: REGULATORY INFORMATION**

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.  
 WHMIS CLASSIFICATION..... C. D2B. E.

**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.