



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

**PRODUCT: CHLOR-OUT**

**CODE: MUR0005**

### SECTION 01: IDENTIFICATION

PRODUCT CODE..... MUR0005  
 PRODUCT IDENTIFIER..... CHLOR-OUT  
 OTHER MEANS OF IDENTIFICATION..... N.AV.  
 RECOMMENDED USE AND ..... REDUCING AGENT FOR SPA WATER.  
 RESTRICTIONS ON USE  
 SUPPLIER IDENTIFIER..... MURSATT CHEMICALS LIMITED  
 11 REGALCREST COURT  
 WOODBRIDGE, ONTARIO  
 CANADA  
 L4L 8P3  
 EMERGENCY PHONE NO..... CANUTEC (613)-996-6666.

### SECTION 02: HAZARD IDENTIFICATION

HAZARD CLASSIFICATION..... NOT HAZARDOUS.  
 SIGNAL WORD..... NOT HAZARDOUS.  
 HAZARD STATEMENT..... N.AP.  
 PRECAUTIONARY STATEMENT..... N.AP.  
 OTHER HAZARDS..... NONE.

### SECTION 03: COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	CAS #	WT. %
SODIUM SULFITE	7757-83-7	97
SODIUM SULFATE	7757-82-6	<3

### SECTION 04: FIRST AID MEASURES

#### DESCRIPTION OF FIRST AID MEASURES:

EYE CONTACT..... FLUSH EYES IMMEDIATELY WITH WATER FOR AT LEAST 15 MINUTES. REMOVE CONTACT LENSES IF PRESENT AFTER THE FIRST 5 MINUTES IF YOU CAN DO SO EASILY AND CONTINUE FLUSHING. GET MEDICAL ATTENTION IF IRRITATION OCCURS AND PERSISTS.

SKIN CONTACT..... IMMEDIATELY WASH SKIN WITH PLENTY OF SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND LAUNDER BEFORE REUSE. GET MEDICAL ATTENTION IF IRRITATION PERSISTS.

INHALATION..... PROMPTLY REMOVE TO FRESH AIR. GET IMMEDIATE MEDICAL ATTENTION IF SIGNS OF SUFFOCATION, IRRITATION OR OTHER SYMPTOMS DEVELOP.

INGESTION..... IF CONSCIOUS, IMMEDIATELY RINSE MOUTH WITH WATER AND GIVE 1 GLASS OF WATER TO DRINK. DO NOT INDUCE VOMITING UNLESS DIRECTED TO DO SO BE MEDICAL PERSONNEL. GET IMMEDIATE MEDICAL ATTENTION.

MOST IMPORTANT SYMPTOMS AND ..... MAY IRRITATE THE SKIN. MAY CAUSE IRRITATION TO THE EYES. HARMFUL IF EFFECTS, ACUTE OR DELAYED: SWALLOWED OR INHALED. MAY CAUSE SEVERE AND POSSIBLY FATAL ALLERGIC REACTIONS IF INHALED OR SWALLOWED BY SOME ASTHMATICS AND OTHER 'SULFITE-SENSITIVE' INDIVIDUALS. REACTS WITH ACIDS TO FORM TOXIC AND IRRITATING SULFUR DIOXIDE GAS.

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED TREAT SYMPTOMATICALLY. NOTE POTENTIAL FOR ANAPHYLACTIC SHOCK WITH ALLERGIC INDIVIDUALS.

### SECTION 05: FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA..... MATERIAL IS NOT FLAMMABLE. USE EXTINGUISHING MEDIA APPROPRIATE FOR MATERIAL IN SURROUNDING FIRE.

UNSUITABLE EXTINGUISHING MEDIA..... N.AV.

SPECIAL HAZARDS ARISING FROM THE PRODUCT: RELEASES TOXIC AND IRRITATING SULFUR DIOXIDE AT FIRE TEMPERATURES.

HAZARDOUS COMBUSTION PRODUCTS. SEE SPECIAL HAZARDS ARISING FROM THE PRODUCT ABOVE.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS: WEAR NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS. USE WATER-SPRAY TO KEEP CONTAINERS COOL, AND TO KNOCK DOWN VAPORS OR GASES.

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**SECTION 06: ACCIDENTAL RELEASE MEASURES**

PERSONAL PRECAUTIONS..... PROVIDE VENTILATION TO CLEAR SULFUR DIOXIDE FUMES WHICH MAY BE GENERATED BY CONTACT WITH WATER. WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT.

ENVIRONMENTAL PRECAUTIONS..... DO NOT ALLOW TO ENTER DRAINS, SEWERS OR WATERCOURSES.

METHODS AND MATERIALS FOR ..... PROMPTLY SWEEP UP MATERIAL WITH MINIMUM DUSTING AND SHOVEL INTO AN CONTAINMENT AND CLEANING UP EMPTY CONTAINER WITH A COVER. RINSE SPILL AREA WITH PLENTY OF WATER.

**SECTION 07: HANDLING AND STORAGE**

PRECAUTIONS FOR SAFE HANDLING:..... AVOID CONTACT WITH SKIN, EYES AND CLOTHING. DO NOT BREATHE DUST. DO NOT EAT OR DRINK IN THE WORK AREA. USE NORMAL PERSONAL HYGIENE AND HOUSEKEEPING. KEEP AWAY FROM ACIDS AND OXIDIZING AGENTS.

CONDITIONS FOR SAFE STORAGE, ..... STORE IN A COOL, DRY, WELL-VENTILATED AREA AWAY FROM ACIDS AND INCLUDING ANY INCOMPATIBILITIES: OXIDIZING AGENTS.

**SECTION 08: EXPOSURE CONTROLS AND PERSONAL PROTECTION**

INGREDIENTS	TWA	ACGIH TLV		PEL	OSHA PEL		REL	NIOSH
		STEL	STEL		STEL	STEL		
SODIUM SULFITE	N.A.V.	N.A.V.	N.A.V.	N.A.V.	N.A.V.	N.A.V.	N.A.V.	N.A.V.
SODIUM SULFATE	N.A.V.	N.A.V.	N.A.V.	N.A.V.	N.A.V.	N.A.V.	N.A.V.	N.A.V.
APPROPRIATE ENGINEERING CONTROLS	LOCAL EXHAUST IF DUSTY CONDITIONS EXIST OR IF THERE IS A RELEASE OF SULFUR DIOXIDE GAS. DO NOT USE IN UNVENTILATED SPACES. E.G., THE HOLDS OF FISHING BOATS, WALK-IN COOLERS OR CONFINED SPACES.							
INDIVIDUAL PROTECTION MEASURE SUCH AS PERSONAL PROTECTIVE EQUIPMENTS:								
HAND PROTECTION.....	FOR HANDLING DRY MATERIAL, WEAR COTTON GLOVES AND FULL WORK CLOTHING, INCLUDING LONG-SLEEVED SHIRT AND TROUSERS. WHEN HANDLING SOLUTIONS AND THERE IS PROLONGED OR REPEATED CONTACT, WEAR IMPERVIOUS GLOVES, CLOTHING AND BOOTS.							
RESPIRATORY PROTECTION.....	WHERE REQUIRED, USE A NIOSH-APPROVED RESPIRATOR FOR DUST, MIST AND/OR SULFUR DIOXIDE GAS, AS CONDITIONS INDICATE. SOME EXPOSURES MAY REQUIRE A NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS OR SUPPLIED-AIR RESPIRATOR.							
EYE PROTECTION.....	WEAR CHEMICAL SAFETY GOGGLES.							
PROTECTIVE CLOTHING.....	SEE ABOVE.							
PROTECTIVE FOOTWEAR.....	SEE ABOVE.							
OTHER.....	ENSURE THAT EYEWASH STATIONS AND SAFETY SHOWERS ARE PROXIMAL TO THE WORK-STATION LOCATION.							
HYGIENIC PRACTICES.....	USE GOOD PERSONAL HYGIENE PRACTICES. WASH HANDS BEFORE EATING, DRINKING, OR SMOKING, OR USING TOILET FACILITIES. PROMPTLY REMOVE CONTAMINATED CLOTHING AND WASH THOROUGHLY BEFORE REUSE.							

**SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES**

PHYSICAL STATE..... SOLID.

COLOR..... WHITE TO PALE YELLOW CRYSTALS OR POWDER.

ODOUR..... ODOURLESS.

ODOUR THRESHOLD..... N.A.V.

PH..... 5% SOLUTION – 9.8.

MELTING/FREEZING POINT..... DECOMPOSES AT 900 C.

BOILING POINT..... N.A.P.

FLASH POINT (C), METHOD..... NONE.

EVAPORATION RATE..... N.A.P.

FLAMMABILITY (SOLIDS AND GASES)..... N.A.V.

UPPER FLAMMABLE LIMIT (% BY VOL.)... N.A.P.

LOWER FLAMMABLE LIMIT (% BY VOL.)... N.A.P.

VAPOUR PRESSURE (MMHG)..... N.A.P.

VAPOUR DENSITY (AIR=1)

RELATIVE DENSITY..... 2.63.

SOLUBILITY IN WATER (% W/W)..... 17% AT 10C (50F); 28% AT 33C (92F).

COEFFICIENT OF WATER/OIL DIST..... N.A.V.

AUTO IGNITION TEMPERATURE..... N.A.V.

DECOMPOSITION TEMPERATURE..... N.A.V.

VISCOSITY..... N.A.P.

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**SECTION 10: STABILITY AND REACTIVITY**

REACTIVITY:..... HAZARDOUS POLYMERISATION WILL NOT OCCUR.  
 CHEMICAL STABILITY:..... STABLE UNDER NORMAL CONDITIONS OF HANDLING AND STORAGE.  
 POSSIBILITY OF HAZARDOUS REACTIONS:..... REACTS WITH ACIDS TO FORM TOXIC AND IRRITATING SULFUR DIOXIDE GAS.  
 REACTIONS:  
 CONDITIONS TO AVOID:..... AVOID ELEVATED TEMPERATURES. TEMPERATURES ABOVE 900 C CAUSE THE RAPID EVOLUTION OF TOXIC AND CORROSIVE SULFUR DIOXIDE GAS AND HAZARDOUS RESIDUE.  
 INCOMPATIBLE MATERIALS:..... OXIDIZERS: MAY CAUSE STRONG EXOTHERMIC REACTIONS. ACIDS: RELEASES SULFUR DIOXIDE GAS.  
 HAZARDOUS PRODUCTS OF DECOMPOSITION ..... SULFUR DIOXIDE AND SODIUM SULFIDE RESIDUE. SODIUM SULFIDE IS FLAMMABLE, A DANGEROUS FIRE RISK, A STRONG IRRITANT TO SKIN AND TISSUE, AND IS INCOMPATIBLE WITH ACIDS.

**SECTION 11: TOXICOLOGICAL INFORMATION**

INGREDIENTS	LC50	LD50
SODIUM SULFITE	>5.5 MG/L/4 HR (IHL, RAT); >22 MG/L/1 HR (IHL, RAT)	2610-6400 MG/KG (ORAL, RAT)
SODIUM SULFATE	N.AV.	>10,000 MG/KG (ORAL, RAT)
INFORMATION ON LIKELY ROUTES OF ENTRY:		
SKIN CONTACT.....	REPEATED OR PROLONGED CONTACT WITH DUST MAY CAUSE IRRITATION. CONTACT WITH SOLUTIONS WILL CAUSE SKIN IRRITATION.	
SKIN ABSORPTION.....	N.AV.	
EYE CONTACT.....	DUST OR MIST MAY IRRITATE THE EYES. SOLUTIONS WILL IRRITATE OR BURN.	
INHALATION.....	INHALATION OF DUST OR MIST CAN IRRITATE THE RESPIRATORY TRACT. MAY CAUSE SEVERE OR DEADLY ALLERGIC REACTIONS IN SOME ASTHMATICS AND SULFITE SENSITIVE INDIVIDUALS. POSSIBLE SIGNS AND SYMPTOMS OF ALLERGIC REACTIONS INCLUDE BRONCHOCONSTRICTION, SWEATING, FLUSHING, HIVES, RAPID HEART RATE, DECREASED BLOOD PRESSURE, AND ANAPHYLAXIS. CONTACT WITH ACIDS RELEASES SULFUR DIOXIDE GAS WHICH MAY BE HARMFUL OR DEADLY IF INHALED.	
INGESTION.....	MAY IRRITATE THE GASTROINTESTINAL TRACT. MAY CAUSE SEVERE OR DEADLY ALLERGIC REACTIONS IN SOME ASTHMATICS AND SULFITE SENSITIVE INDIVIDUALS. LARGE DOSES MAY CAUSE VIOLENT COLIC AND DIARRHEA, CIRCULATORY DISTURBANCES, CENTRAL NERVOUS SYSTEM DEPRESSION, AND EVEN DEATH.	
EFFECTS OF ACUTE EXPOSURE.....	SEE ABOVE.	
EFFECTS OF CHRONIC EXPOSURE.....	NONE KNOWN.	
SIGNS AND SYMPTOMS OF OVEREXPOSURE		
CARCINOGENICITY OF MATERIAL.....	SODIUM SULFITE: IARC - GROUP 3. ACGIH - NOT LISTED. SODIUM SULFATE: IARC & ACGIH - NOT LISTED.	
TERATOGENICITY.....	N.AV.	
MUTAGENICITY.....	SODIUM SULFITE HAS BEEN DEMONSTRATED TO BE MUTAGENIC IN MICROBIAL SYSTEMS; HOWEVER, IT IS NOT MUTAGENIC IN STUDIES INVOLVING INSECTS AND IS NOT CONSIDERED TO PRESENT A MUTAGENIC THREAT TO MULTI-CELL ORGANISMS.	
REPRODUCTIVE EFFECTS.....	N.AV.	
SENSITIZING CAPABILITY OF MATERIAL.....	N.AV.	
SYNERGISTIC MATERIALS.....	N.AV.	

**SECTION 12: ECOLOGICAL CONSIDERATIONS**

ECOTOXICITY..... N.AV.  
 PERSISTENCE AND DEGRADATION..... N.AV.  
 BIOACCUMULATIVE POTENTIAL..... N.AV.  
 MOBILITY IN SOIL..... N.AV.  
 OTHER ADVERSE EFFECTS..... N.AV.

**SECTION 13: DISPOSAL CONSIDERATIONS**

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

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**SECTION 14: TRANSPORT INFORMATION**

UN NUMBER..... N.AP.  
 PROPER SHIPPING NAME..... N.AP.  
 TDG CLASSIFICATION..... NOT REGULATED.  
 PACKING GROUP..... N.AP.  
 ENVIRONMENTAL HAZARDS ACCORDING N.AV.  
 TO THE INTERNATIONAL MARITIME  
 DANGEROUS GOODS CODE AND THE  
 UNITED NATIONS MODEL REGULATIONS:  
 SPECIAL PRECAUTIONS IN CONNECTION N.AV.  
 WITH TRANSPORT OR CONVEYANCE  
 EITHER WITHIN OR OUTSIDE THE  
 PREMISES:

**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 APPLICABLE  
 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.

PREPARED BY..... REGULATORY AFFAIRS  
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