



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

PRODUCT: BROMINATING TABLETS FOR SPAS & HOT TUBS

CODE: MUR0001

SECTION 01: IDENTIFICATION

PRODUCT CODE..... MUR0001
 PRODUCT IDENTIFIER..... BROMINATING TABLETS FOR SPAS & HOT TUBS
 OTHER MEANS OF IDENTIFICATION..... N.AV.
 RECOMMENDED USE AND SWIMMING POOL PRODUCT. SPA PRODUCT.
 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..... ACUTE TOXICITY (ORAL) - CATEGORY 4. SKIN CORROSION — CATEGORY 1. SERIOUS EYE DAMAGE - CATEGORY 1. OXIDIZING SOLIDS - CATEGORY 2.
 SIGNAL WORD..... DANGER.
 HAZARD STATEMENT..... H272 MAY INTENSIFY FIRE; OXIDIZER. H302 HARMFUL IF SWALLOWED. H314 CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.
 PRECAUTIONARY STATEMENT..... P210 KEEP AWAY FROM HEAT/SPARKS/OPEN FLAMES/HOT SURFACES. – NO SMOKING. P220 KEEP/STORE AWAY FROM CLOTHING/COMBUSTIBLE MATERIALS. P221 TAKE ANY PRECAUTION TO AVOID MIXING WITH COMBUSTIBLES.... P270 DO NO EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT. P301+P312 IF SWALLOWED: CALL A POISON CENTER OR DOCTOR/PHYSICIAN IF YOU FEEL UNWELL. P301+P330+P331 IF SWALLOWED: RINSE MOUTH. DO NOT INDUCE VOMITING. P370+P378 IN CASE OF FIRE: USE ONLY WATER FOR EXTINCTION. 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. P363 WASH CONTAMINATED CLOTHING BEFORE REUSE. P304+P340 IF INHALED: REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A POSITION COMFORTABLE FOR BREATHING. P310 IMMEDIATELY CALL A POISON CENTER OR DOCTOR/PHYSICIAN. P321 SPECIFIC TREATMENT (SEE SUPPLEMENTAL FIRST AID INSTRUCTIONS ON THE SAFETY DATA SHEET). P305+P351+P338 IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING. 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.

SECTION 03: COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	CAS #	WT. %
1-BROMO-3-CHLORO-5,5-DIMETHYLIMIDAZOLIDINE-2,4-DIONE	16079-88-2	96

SECTION 04: FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURES:
 EYE CONTACT..... IMMEDIATELY FLUSH WITH PLENTY OF WATER. AFTER INITIAL FLUSHING, REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING FOR AT LEAST 15 MINUTES. KEEP EYE WIDE OPEN WHILE RINSING. IF SYMPTOMS PERSIST, CALL A PHYSICIAN.
 SKIN CONTACT..... REMOVE CONTAMINATED CLOTHING AND SHOES. RINSE IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. CALL A PHYSICIAN OR POISON CONTROL CENTRE IMMEDIATELY.

PRODUCT: BROMINATING TABLETS FOR SPAS & HOT TUBS**CODE: MUR0001****SECTION 04: FIRST AID MEASURES**

INHALATION..... REMOVE TO FRESH AIR. IF BREATHING IS IRREGULAR OR STOPPED, ADMINISTER ARTIFICIAL RESPIRATION. AVOID DIRECT CONTACT WITH SKIN. USE BARRIER TO GIVE MOUTH-TO-MOUTH RESUSCITATION. CALL A PHYSICIAN.

INGESTION..... CALL A PHYSICIAN IMMEDIATELY. DO NOT INDUCE VOMITING. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. HAVE PERSON SIP A GLASS OF WATER IF ABLE TO SWALLOW.

MOST IMPORTANT SYMPTOMS AND SEE SECTION 11.
EFFECTS, ACUTE OR DELAYED:

INDICATION OF ANY IMMEDIATE MEDICAL NOTE TO PHYSICIANS: TREAT SYMPTOMATICALLY. PROBABLE MUCOSAL
ATTENTION AND SPECIAL TREATMENT DAMAGE MAY CONTRAINDICATE THE USE OF GASTRIC LAVAGE.
NEEDED

SECTION 05: FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA..... FLOOD FIRE AREA WITH WATER FROM A DISTANCE.
UNSUITABLE EXTINGUISHING MEDIA..... DO NOT USE DRY CHEMICALS, CARBON DIOXIDE, OR HALOGENATED EXTINGUISHING AGENTS.

SPECIAL HAZARDS ARISING FROM THE DO NOT LET THE FIRE BURN.
PRODUCT:

HAZARDOUS COMBUSTION PRODUCTS. SEE HAZARDOUS DECOMPOSITION PRODUCTS.
SPECIAL PROTECTIVE EQUIPMENT AND AS IN ANY FIRE, WEAR A SELF-CONTAINED BREATHING APPARATUS IN
PRECAUTIONS FOR FIRE-FIGHTERS: PRESSURE-DEMAND, MSHA/NIOSH (APPROVED OR EQUIVALENT), AND FULL
PROTECTIVE GEAR.

SECTION 06: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS..... AVOID CONTACT WITH SKIN, EYES OR CLOTHING. USE PERSONAL PROTECTIVE EQUIPMENT AS REQUIRED. ENSURE ADEQUATE VENTILATION, ESPECIALLY IN CONFINED AREAS.

ENVIRONMENTAL PRECAUTIONS..... PREVENT ENTRY INTO WATERWAYS, SEWERS, BASEMENTS OR CONFINED AREAS. DO NOT FLUSH INTO SURFACE WATER OR SANITARY SEWER SYSTEM. PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO.

METHODS AND MATERIALS FOR PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. COVER POWDER
CONTAINMENT AND CLEANING UP SPILL WITH PLASTIC SHEET OR TARP TO MINIMIZE SPREADING AND KEEP POWDER DRY. DO NOT ADD WATER TO SPILLED MATERIAL. USING CLEAN DEDICATED EQUIPMENT, SWEEP AND SCOOP ALL SPILLED MATERIAL, CONTAMINATED SOIL, AND OTHER CONTAMINATED MATERIAL AND PLACE INTO CLEAN DRY CONTAINERS FOR DISPOSAL. DO NOT CLOSE CONTAINERS CONTAINING WET OR DAMP MATERIAL. THEY SHOULD BE LEFT OPEN TO DISPERSE ANY HAZARDOUS GASES THAT MAY FORM. USE PERSONAL PROTECTIVE EQUIPMENT AS REQUIRED. COVER POWDER SPILL WITH PLASTIC SHEET OR TARP TO MINIMIZE SPREADING AND KEEP POWDER DRY. TAKE UP MECHANICALLY, PLACING IN APPROPRIATE CONTAINERS FOR DISPOSAL. AVOID CREATING DUST CLEAN CONTAMINATED SURFACE THOROUGHLY. PICK UP AND TRANSFER TO PROPERLY LABELED CONTAINERS. SWEEP UP AND SHOVEL INTO SUITABLE CONTAINERS FOR DISPOSAL. AFTER CLEANING, FLUSH AWAY TRACES WITH WATER. DO NOT USE FLOOR SWEEPING COMPOUNDS TO CLEAN UP SPILLS. DO NOT TRANSPORT WET OR DAMP MATERIAL.

SECTION 07: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING:..... AVOID CONTACT WITH SKIN, EYES OR CLOTHING. USE PERSONAL PROTECTIVE EQUIPMENT AS REQUIRED. WASH CONTAMINATED CLOTHING BEFORE REUSE. DO NOT BREATHE DUST/FUME/GAS/MIST/VAPORS/SPRAY. DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT. USE WITH LOCAL EXHAUST VENTILATION. DO NOT MIX WITH OTHER CHEMICALS. KEEP/STORE AWAY FROM CLOTHING/ COMBUSTIBLE MATERIALS. WASH THOROUGHLY AFTER HANDLING. USE ONLY IN WELL-VENTILATED AREAS.

CONDITIONS FOR SAFE STORAGE, KEEP OUT OF THE REACH OF CHILDREN. KEEP CONTAINERS TIGHTLY CLOSED IN
INCLUDING ANY INCOMPATIBILITIES: A COOL, WELL-VENTILATED PLACE. KEEP IN A DRY PLACE. KEEP IN PROPERLY LABELED CONTAINERS.

SECTION 08: EXPOSURE CONTROLS AND PERSONAL PROTECTION

INGREDIENTS	TWA	ACGIH TLV STEL	PEL	OSHA PEL STEL	REL	NIOSH

PRODUCT: BROMINATING TABLETS FOR SPAS & HOT TUBS

CODE: MUR0001

SECTION 08: EXPOSURE CONTROLS AND PERSONAL PROTECTION

INGREDIENTS	TWA	ACGIH TLV STEL	PEL	OSHA PEL STEL	REL	NIOSH
-------------	-----	-------------------	-----	------------------	-----	-------

1-BROMO-3-CHLORO-5, 5-DIMETHYLIMIDAZOLIDINE-2,4-DIONE	N.A.V.	N.A.V.	N.A.V.	N.A.V.	N.A.V.	N.A.V.
---	--------	--------	--------	--------	--------	--------

APPROPRIATE ENGINEERING CONTROLS USE WITH ADEQUATE VENTILATION. LOCAL EXHAUST AS NEEDED.

INDIVIDUAL PROTECTION MEASURE SUCH AS PERSONAL PROTECTIVE EQUIPMENTS:

HAND PROTECTION.....	WEAR PROTECTIVE GLOVES.
RESPIRATORY PROTECTION.....	IF EXPOSURE LIMITS ARE EXCEEDED OR IRRITATION IS EXPERIENCED, NIOSH/MSHA APPROVED RESPIRATORY PROTECTION SHOULD BE WORN. POSITIVE-PRESSURE SUPPLIED AIR RESPIRATORS MAY BE REQUIRED FOR HIGH AIRBORNE CONTAMINANT CONCENTRATIONS. RESPIRATORY PROTECTION MUST BE PROVIDED.
EYE PROTECTION.....	WEAR SAFETY GLASSES WITH SIDE SHIELDS (OR GOGGLES). TIGHT SEALING SAFETY GOGGLES.
PROTECTIVE CLOTHING.....	PROTECTIVE CLOTHING.
PROTECTIVE FOOTWEAR.....	PROTECTIVE FOOTWEAR.
OTHER.....	ENSURE THAT EYEWASH STATIONS AND SAFETY SHOWERS ARE CLOSE TO THE WORKSTATION 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 (TABLETS).
COLOR.....	WHITE.
ODOUR.....	CHLORINE, BROMINE.
ODOUR THRESHOLD.....	N.A.V.
PH.....	4.5 (0.1% SOLUTION IN DI WATER).
FREEZING/MELTING POINT.....	120 C (248 F).
BOILING POINT.....	N.AP.
FLASH POINT (C), METHOD.....	N.AP.
EVAPORATION RATE.....	N.AP.
FLAMMABILITY (SOLIDS AND GASES).....	N.A.V.
UPPER FLAMMABLE LIMIT (% BY VOL.)...	N.AP.
LOWER FLAMMABLE LIMIT (% BY VOL.)...	N.AP.
VAPOUR PRESSURE (MMHG).....	N.AP.
VAPOUR DENSITY (AIR=1).....	N.AP.
RELATIVE DENSITY.....	0.87 - 0.92.
SOLUBILITY IN WATER (% W/W).....	N.A.V.
COEFFICIENT OF WATER/OIL DIST.....	N.AP.
AUTO IGNITION TEMPERATURE.....	N.A.V.
DECOMPOSITION TEMPERATURE.....	N.A.V.
VISCOSITY.....	N.AP.

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:	NONE UNDER NORMAL PROCESSING.
CONDITIONS TO AVOID:.....	EXTREMES OF TEMPERATURE AND DIRECT SUNLIGHT. PROTECT FROM MOISTURE. DO NOT MIX WITH OTHER CHEMICALS.
INCOMPATIBLE MATERIALS:.....	STRONG ACIDS AND BASES. AMMONIA. CALCIUM HYPOCHLORITE. COMBUSTIBLE MATERIAL. DO NOT MIX WITH OTHER SWIMMING POOL/SPA CHEMICALS IN THEIR CONCENTRATED FORMS. REDUCING AGENT.
HAZARDOUS PRODUCTS OF DECOMPOSITION	THERMAL DECOMPOSITION CAN LEAD TO RELEASE OF TOXIC/CORROSIVE GASES AND VAPORS.

SECTION 11: TOXICOLOGICAL INFORMATION

PRODUCT: BROMINATING TABLETS FOR SPAS & HOT TUBS

CODE: MUR0001

SECTION 11: TOXICOLOGICAL INFORMATION

INGREDIENTS	LC50	LD50
-------------	------	------

1-BROMO-3-CHLORO-5,5-DIMETHYLIMIDAZOLIDINE-2,4-DIONE

N.AV.

578 MG/KG (ORAL, RAT); > 2000
MG/KG (DERMAL, RABBIT)

INFORMATION ON LIKELY ROUTES OF ENTRY:

SKIN CONTACT.....	IRRITATING TO SKIN. CONTACT WITH MOIST SKIN MAY CAUSE SKIN BURNS. CAUSES BURNS.
SKIN ABSORPTION.....	N.AV.
EYE CONTACT.....	RISK OF SERIOUS DAMAGE TO EYES.
INHALATION.....	IRRITATING TO RESPIRATORY SYSTEM.
INGESTION.....	HARMFUL IF SWALLOWED.
EFFECTS OF ACUTE EXPOSURE.....	SEE ABOVE.
EFFECTS OF CHRONIC EXPOSURE.....	NO INFORMATION AVAILABLE.
SIGNS AND SYMPTOMS OF OVEREXPOSURE	
CARCINOGENICITY OF MATERIAL.....	CAS# 16079-88-2 - NOT LISTED BY IARC.
TERATOGENICITY.....	NO INFORMATION AVAILABLE.
MUTAGENICITY.....	NO INFORMATION AVAILABLE.
REPRODUCTIVE EFFECTS.....	NO INFORMATION AVAILABLE.
SENSITIZING CAPABILITY OF MATERIAL	NO INFORMATION AVAILABLE.
SYNERGISTIC MATERIALS.....	NO INFORMATION AVAILABLE.

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.

SECTION 14: TRANSPORT INFORMATION

UN NUMBER.....	1479.
PROPER SHIPPING NAME.....	OXIDIZING SOLID, N.O.S. (BROMO-CHLORO-DIMETHYLHYDANTOIN).
TDG CLASSIFICATION.....	5.1.
PACKING GROUP.....	III.
ENVIRONMENTAL HAZARDS ACCORDING TO THE INTERNATIONAL MARITIME DANGEROUS GOODS CODE AND THE UNITED NATIONS MODEL REGULATIONS:	
SPECIAL PRECAUTIONS IN CONNECTION WITH TRANSPORT OR CONVEYANCE EITHER WITHIN OR OUTSIDE THE PREMISES:	N.AV.

SECTION 15: REGULATORY INFORMATION

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

SECTION 16: OTHER INFORMATIONN.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

PRODUCT: BROMINATING TABLETS FOR SPAS & HOT TUBS

CODE: MUR0001

SECTION 16: OTHER INFORMATION

OTHER INFORMATION..... 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

PREPARATION DATE..... JAN 1/2024