

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

PRODUCT: SPA-CAL CODE: MUR0009

SECTION 01: IDENTIFICATION

PRODUCT CODE..... MUR0009 PRODUCT IDENTIFIER..... SPA-CAL OTHER MEANS OF IDENTIFICATION...... RECOMMENDED USE AND N.AV.

RESTRICTIONS ON USE

SPA WATER TREATMENT.

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 IRRITATION — CATEGORY 2. EYE IRRITATION - CATEGORY 2B.

SIGNAL WORD..... **WARNING**

HAZARD STATEMENT..... H302 HARMFUL IF SWALLOWED. H315 CAUSES SKIN IRRITATION. H320 CAUSES

EYE IRRITATION.

PRECAUTIONARY STATEMENT..... P264 WASH SKIN THOROUGHLY AFTER HANDLING. P270 DO NO EAT, DRINK OR

SMOKE WHEN USING THIS PRODUCT. P301+P312+P330 IF SWALLOWED: CALL A POISON CENTER OR DOCTOR/PHYSICIAN IF YOU FEEL UNWELL. RINSE MOUTH. P280 WEAR PROTECTIVE GLOVES/PROTECTIVE CLOTHING/EYE PROTECTION. P302+P352 IF ON SKIN: WASH WITH PLENTY OF COMPANION/FEEL PROTECTION. P304-P352 IF ON SKIN: WASH WITH PLENTY OF SOAP AND WATER. P321 SPECIFIC TREATMENT (SEE SUPPLEMENTAL FIRST AID INSTRUCTIONS ON THE SAFETY DATA SHEET). P332+P313 IF SKIN IRRITATION OCCURS: GET MEDICAL ADVICE/ATTENTION. P362+P364 TAKE OFF

CONTAMINATED CLOTHING AND WASH BEFORE REUSE. P305+P351+P338 IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING. P337+P313 IF EYE IRRITATION PERSISTS: GET MEDICAL ADVICE/ATTENTION. 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. %			
CALCIUM CHLORIDE	10043-52-4	34-37			
POTASSIUM CHLORIDE	7447-40-7	0.8-1.3			
SODIUM CHLORIDE	7647-14-5	0.4-0.9			

SECTION 04: FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURES:

IF IN EYES, RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING. IF EYE CONTACT.....

IRRITATION OCCURS, GET MEDICAL ADVICE/ATTENTION.

SKIN CONTACT..... IF ON SKIN, WASH WITH PLENTY OF WATER. IF SKIN IRRITATION OCCURS: GET MEDICAL ADVICE/ ATTENTION. TAKE OFF CONTAMINATED CLOTHING AND WASH BEFORE REUSE. SPECIFIC TREATMENT: WASH WITH LOTS OF WATER. REMOVE PERSON TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL

INHALATION.....

RESPIRATION. IF BREATHING IS DIFFICULT, GET IMMEDIATE MEDICAL ATTENTION.

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SECTION 04: FIRST AID MEASURES

INGESTION.....

IF SWALLOWED, RINSE MOUTH. CONTACT A POISON CENTER OR DOCTOR/PHYSICIAN IF YOU FEEL UNWELL

MOST IMPORTANT SYMPTOMS AND EFFECTS, ACUTE OR DELAYED:

NHALATION MAY CAUSE IRRITATION TO UPPER RESPIRATORY TRACT (NOSE AND THROAT). NASAL MUCOSAL AND OROPHARYNGEAL EYTHEMA. SKIN: SKIN IRRITATION. DIRECT ABRASION OF SKIN FROM SOLID, ERYTHEMA AND BURN FROM REACTION WITH WATER. PROLONGED CONTACT AND OCCLUSION MAY CAUSE MORE SEVERE SYMPTOMS. DAMAGE IS LOCALIZED TO CONTACT AREAS. EYE: EYE IRRITATION. DIRECT ABRASION OF CORNEA FROM SOLID, ERYTHEMA AND BURN FROM REACTION WITH WATER, CONJUNCTIVAL SWELLING AND CORNEA OPACIFICATION FROM HYPERTONIC SOLUTION AND HEAT. CORNEAL EYE PAIN, REDNESS, ACUTE CORNEAL THICKENING OR WHITENING. INGESTION (SWALLOWING): CONSUMPTION OF SOLIDS OR HYPERTONIC SOLUTIONS CAUSES NAUSEA, VOMITING, AND INCREASED THIRST. DELAYED SYMPTOMS/EFFECTS -CHRONIC EXPOSURES TO SKIN AND MUCUS MEMBRANES THAT CAUSE IRRITATION MAY CAUSE A CHRONIC DERMATITIS OR MUCOSAL MEMBRANE PROBLEM.
ANY SKIN CONDITION THAT DISRUPTS THE SKIN, SUCH AS ABRASIONS, CUTS.

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

PSORIASIS, FUNGAL INFECTIONS, ETC. ANY UPPER RESPIRATORY CONDITIONS THAT COMPROMISE MUCOSA CAN INCREASE LOCAL DAMAGE FROM DUST CONTACT. ANY EYE CONDITION THAT COMPROMISES TEAR PRODUCTION, CONJUNCTIVA, OR NORMAL CORNEAL HOMEOSTASIS. PROTECTION OF FIRST-AIDERS: AT MINIMUM, TREATING PERSONNEL SHOULD UTILIZE PPE SUFFICIENT FOR PREVENTION OF BLOODBORNE PATHOGEN TRANSMISSION. IF POTENTIAL FOR EXPOSURE EXISTS REFER TO SECTION 8 FOR SPECIFIC PERSONAL PROTECTIVE EQUIPMENT. NOTES TO PHYSICIAN: DUE TO IRRITANT PROPERTIES, RESULTING FROM HEAT CREATED AS SOLID MATERIAL DISSOLVES IN WATER, SWALLOWING MAY RESULT IN BURNS/ULCERATION OF MUCUS MEMBRANES. IF BURN IS PRESENT, TREAT AS ANY THERMAL BURN, AFTER DECONTAMINATION. NO SPECIFIC ANTIDOTE. TREATMENT OF EXPOSURE SHOULD BE DIRECTED AT THE CONTROL OF SYMPTOMS AND THE CLINICAL CONDITION OF THE PATIENT.

SECTION 05: FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA...... UNSUITABLE EXTINGUISHING MEDIA..... SPECIAL HAZARDS ARISING FROM THE PRODUCT:

USE EXTINGUISHING AGENTS APPROPRIATE FOR SURROUNDING FIRE. N.AV.

THIS MATERIAL DOES NOT BURN.

HAZARDOUS COMBUSTION PRODUCTS. SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS:

HYDROGEN CHLORIDE GAS, CALCIUM OXIDE. KEEP UNNECESSARY PEOPLE AWAY, ISOLATE HAZARD AREA AND DENY ENTRY. THIS MATERIAL DOES NOT BURN. FIGHT FIRE FOR OTHER MATERIAL THAT IS BURNING. WATER SHOULD BE APPLIED IN LARGE QUANTITIES AS FINE SPRAY. WEAR NIOSH APPROVED POSITIVE-PRESSURE SELF-CONTAINED BREATHING APPARATUS OPERATED IN PRESSURE DEMAND MODE. WEAR PROTECTIVE FIRE FIGHTING CLOTHING (INCLUDES FIRE FIGHTING HELMET, COAT, TROUSERS, BOOTS, AND GLOVES). AVOID CONTACT WITH THIS MATERIAL DURING FIRE FIGHTING OPERATIONS. IF CONTACT IS LIKELY, CHANGE TO FULL CHEMICAL RESISTANT FIRE FIGHTING CLOTHING WITH SELF-CONTAINED BREATHING APPARATUS. IF THIS IS NOT AVAILABLE, WEAR FULL CHEMICAL RESISTANT CLOTHING WITH SELF-CONTAINED BREATHING APPARATUS AND FIGHT FIRE FROM A REMOTE LOCATION. FOR PROTECTIVE EQUIPMENT IN POST-FIRE OR NON-FIRE CLEAN-UP SITUATIONS, REFER TO THE RELEVANT SECTIONS.

SECTION 06: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS.....

ISOLATE AREA. KEEP UNNECESSARY AND UNPROTECTED PERSONNEL FROM ENTERING THE AREA. USE APPROPRIATE SAFETY EQUIPMENT. FOR ADDITIONAL INFORMATION, REFER TO SECTION 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, REFER TO SECTION 7, HANDLING, FOR ADDITIONAL PRECAUTIONARY MEASURES.

ENVIRONMENTAL PRECAUTIONS.....

PREVENT FROM ENTERING INTO SOIL, DITCHES, SEWERS, WATERWAYS AND/OR GROUNDWATER.

SMALL AND LARGE SPILLS: CONTAIN SPILLED MATERIAL IF POSSIBLE. COLLECT IN SUITABLE AND PROPERLY LABELED CONTAINERS. FLUSH RESIDUE WITH PLENTY OF WATER.

METHODS AND MATERIALS FORCONTAINMENT AND CLEANING UP

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SECTION 07: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING:..... AVOID CONTACT WITH EYES, SKIN, AND CLOTHING. DO NOT SWALLOW. WASH THOROUGHLY AFTER HANDLING. KEEP CONTAINER TIGHTLY CLOSED. SEE SECTION 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION. STORE IN A DRY PLACE. PROTECT FROM ATMOSPHERIC MOISTURE. KEEP CONTAINER TIGHTLY CLOSED. KEEP SEPARATED FROM INCOMPATIBLE SUBSTANCES.

INCLUDING ANY IMCOMPATIBILITES:

SECTION 08: EXPOSURE CONTROLS AND PERSONAL PROTECTION

INGREDIENTS	TWA	GIH TLV STEL	OSH/	A PEL STEL	NIOSH REL
CALCIUM CHLORIDE	N.AV.	N.AV.	N.AV.	N.AV.	N.AV.
POTASSIUM CHLORIDE	N.AV.	N.AV.	N.AV.	N.AV.	N.AV.
SODIUM CHLORIDE	N.AV.	N.AV.	N.AV.	N.AV.	N.AV.
APPROPRIATE ENGINE		S USE LOCAL EXHAUST MAINTAIN AIRBORNE GUIDELINES. IF THER OR GUIDELINES, GEN OPERATIONS. LOCAL OPERATIONS. ACGIH (TWA) - 10 MG	LEVELS BELOW EX E ARE NO APPLICAL IERAL VENTILATION EXHAUST VENTILA (M3 (INHALABLE) 3 N	POSURE LIMIT REQUI BLE EXPOSURE LIMIT SHOULD BE SUFFICI TION MAY BE NECESS	REMENTS OR REQUIREMENTS ENT FOR MOST SARY FOR SOME
INDIVIDUAL PROTECTI SUCH AS PERSONAL F		NOT OTHERWISE SPE	ECIFIED (PNOS).		
EQUIPMENTS: HAND PROTECTION. RESPIRATORY PROT		USE GLOVES CHEMIC SCRATCHED, USE GL FOR BRIEF EXPOSUR INCLUDE: NEOPRENE NITRILE/BUTADIENE FOR WORKPLACE SHOULI FACTORS SUCH AS, E HANDLED, PHYSICAL DEXTERITY, THERMA MATERIALS, AS WELL GLOVE SUPPLIER. RESPIRATORY PROTIENT EXCEED THE EXPOSUR OF APPLICABLE EXPORTATION OR DISCORDED	OVES CHEMICALLY LES. EXAMPLES OF F. E. POLYVINYL CHLOF RUBBER ("NITRILE" (R A PARTICULAR AP D ALSO TAKE INTO A BUT NOT LIMITED TO REQUIREMENTS (C L PROTECTION), PC L AS THE INSTRUCTI ECTION SHOULD BE JRE LIMIT REQUIRE DSURE LIMIT REQUIRE	RESISTANT TO THIS PREFERRED GLOVE E RIDE ("PVC" OR "VINY OR "NBR"). NOTICE: TI PLICATION AND DURACCOUNT ALL RELEV. D: OTHER CHEMICALS UT/PUNCTURE PROTITENTIAL BODY REACIONS/SPECIFICATION WORN WHEN THERE MENTS OR GUIDELIN REMENTS OR GUIDELERSE EFFECTS, SUCHEMENTS, SUCHEMENTS, SUCHEMENTS OR GUIDELERSE EFFECTS, SUCHEMENTS OR GUIDELERSE EFFECTS OR GUIDELERSE EFF	MATERIAL EVEN BARRIER MATERIALS L"), HE SELECTION OF A ATION OF USE IN A ANT WORKPLACE B WHICH MAY BE ECTION, ITIONS TO GLOVE S PROVIDED BY THE E IS A POTENTIAL TO ES. IF THERE ARE LINES, WEAR H AS RESPIRATORY
EYE PROTECTION PROTECTIVE CLOTH PROTECTIVE FOOTV OTHER	INGVEAR	BY YOUR RISK ASSES AN APPROVED PARTI EFFECTIVE TYPES OF PARTICULATE AIR (HI MEETS 29 CFR 1910.1 CONDITIONS WARRAI WEAR SAFETY GLASS WHEN HANDLING SOI WEAR CLEAN, BODY- PROTECTIVE FOOTW EYEWASH STATION A	SSMENT PROCESS. CULATE RESPIRATO F AIR-PURIFYING RE EPA) N95. A RESPIR. 34 MUST BE FOLLO NT USE OF A RESPIR. SES WITH SIDE-SHIE LUTIONS OF THE MA COVERING CLOTHIN EAR. ND SAFETY SHOWE LL HYGIENE. DO NOT	IN DUSTY OR MISTY A DR. THE FOLLOWING ISPIRATORS: HIGH EF ATORY PROTECTION WED WHENEVER WO RATOR. ELDS. FOR DUSTY OP ATERIAL, WEAR CHEN NG. ER IN WORK AREA. I CONSUME OR STOF	ATMOSPHERES, USE SHOULD BE FICIENCY PROGRAM THAT RKPLACE ERATIONS OR IICAL GOGGLES.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	LIQUID.
COLOR	N.AV.
ODOUR	ODOURLESS.
ODOUR THRESHOLD	N.AV.
PH	9.0 - 10.0.
MELTING POINT (C)	N.AP.
BOILING POINT	N.AP.
FLASH POINT (C), METHOD	N.AP.
EVAPORATION RATE	N.AP.
FLAMMABILITY (SOLIDS AND GASES)	N.AV.

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SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

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...... 1.30 - 1.35.
SOLUBILITY IN WATER (% W/W)..... READILY SOLUBLE.
COEFFICIENT OF WATER/OIL DIST.... N.AV.
AUTO IGNITION TEMPERATURE.... N.AP.
DECOMPOSITION TEMPERATURE.... N.AV.

VISCOSITY.....

SECTION 10: STABILITY AND REACTIVITY

N.AV.

SECTION 11: TOXICOLOGICAL INFORMATION

INGREDIENTS	LC50	LD50
CALCIUM CHLORIDE	N.AV.	1000 MG/KG (ORAL, RAT); 2630 MG/KG (DERMAL, RAT)
POTASSIUM CHLORIDE	N.AV.	2600 MG/KG (ORAL, RAT)
SODIUM CHLORIDE	42 G/M3 1H (INH, RAT).	3 G/KG (ORAL, RAT); 10 G/KG (DERMAL, RABBIT)
INFORMATION ON LIKELY ROUTES OF		

ENTRY:

DECOMPOSITION

SKIN CONTACT......BRIEF CONTACT IS ESSENTIALLY NONIRRITATING TO SKIN. PROLONGED
CONTACT MAY CAUSE SKIN IRRITATION, EVEN A BURN. NOT CLASSIFIED AS
CORROSIVE TO THE SKIN ACCORDING TO DOT GUIDELINES. MAY CAUSE MORE
SEVERE RESPONSE IF SKIN IS DAMP, ABRADED (SCRATCHED OR CUT), OR

SEVERE RESPONSE IF SKIN IS DAMP, ABRADED (SCRATCHED OR CUT), OR COVERED BY CLOTHING, GLOVES, OR FOOTWEAR.

SKIN ABSORPTION......N.AV.

IRRITATION WITH CORNEAL INJURY.

INHALATION...... DUST MAY CAUSE IRRITATION TO UPPER RESPIRATORY TRACT (NOSE AND

THROAT).

A RESULT OF NORMAL HANDLING OPERATIONS ARE NOT LIKELY TO CAUSE INJURY; HOWEVER, SWALLOWING LARGER AMOUNTS MAY CAUSE LOCAL MUCOSAL DAMAGE TO ESOPHAGUS AND STOMACH. SWALLOWING MAY RESULT

IN GASTROINTESTINAL IRRITATION OR ULCERATION.

EFFECTS OF ACUTE EXPOSURE...... SEE ABOVE

EFFECTS OF CHRONIC EXPOSURE...... CHRONIC TOXICITY

CHRONIC TOXICITY: FOR THE MINOR COMPONENT(S): POTASSIUM CHLORIDE - IN ANIMALS, EFFECTS HAVE BEEN REPORTED ON THE FOLLOWING ORGANS AFTER INGESTION: GASTROINTESTINAL TRACT, HEART, AND KIDNEY. DOSE LEVELS PRODUCING THESE EFFECTS WERE MANY TIMES HIGHER THAN ANY DOSE LEVELS EXPECTED FROM EXPOSURE DUE TO USE. MEDICAL EXPERIENCE WITH SODIUM CHLORIDE HAS SHOWN A STRONG ASSOCIATION BETWEEN ELEVATED BLOOD PRESSURE AND PROLONGED DIETARY OVERUSE. RELATED EFFECTS

COULD OCCUR IN THE KIDNEYS.

SIGNS AND SYMPTOMS OF SOLUTION AND OR SOLIDS MAY BE VISIBLE ON THE SKIN AND OR EYES.

OVEREXPOSURE LOCALIZED REDNESS, WARMTH, AND IRRITATION CONSISTENT WITH MECHANISM OF INJURY: ABRASION, BURN, HYPERTONIC SOLUTION.

CARCINOGENICITY OF MATERIAL....... THIS PRODUCT IS NOT CLASSIFIED AS A CARCINOGEN BY NTP, IARC OR OSHA.

TERATOGENICITY...... N.AV.

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SECTION 11: TOXICOLOGICAL INFORMATION

NOT CLASSIFIED AS A MUTAGEN PER GHS CRITERIA. THE DATA PRESENTED ARE MUTAGENICITY.....

FOR THE FOLLOWING MATERIAL: CALCIUM CHLORIDE (CACL2) - IN VITRO

GENETIC TOXICITY STUDIES WERE NEGATIVE. THE DATA PRESENTED ARE FOR THE FOLLOWING MATERIAL: POTASSIUM CHLORIDE - IN VITRO GENETIC TOXICITY STUDIES WERE POSITIVE. HOWEVER, THE RELEVANCE OF THIS TO HUMANS IS UNKNOWN. FOR THE MINOR COMPONENT(S): SODIUM CHLORIDE - IN VITRO

GENETIC TOXICITY STUDIES WERE PREDOMINANTLY NEGATIVE.

REPRODUCTIVE EFFECTS..... 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.

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 THET ARE APPROPRIATE.

PREPARED BY..... **REGULATORY AFFAIRS**

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