



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

PRODUCT: SUPER-SHOCK

CODE: MUR0027

### SECTION 01: IDENTIFICATION

PRODUCT CODE..... MUR0027  
 PRODUCT IDENTIFIER..... SUPER-SHOCK  
 OTHER MEANS OF IDENTIFICATION..... N.AV.  
 RECOMMENDED USE AND ..... INDUSTRIAL APPLICATION, CHLORINE DISINFECTANT, POOL CHEMICALS.  
 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..... OXIDIZING SOLIDS - CATEGORY 2. ACUTE TOXICITY (ORAL) - CATEGORY 4. SKIN CORROSION - CATEGORY 1B. SERIOUS EYE DAMAGE - CATEGORY 1. SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - CATEGORY 3 RESPIRATORY SYSTEM. ACUTE AQUATIC TOXICITY - CATEGORY 1. CHRONIC AQUATIC TOXICITY - CATEGORY 1.

SIGNAL WORD..... DANGER.

HAZARD STATEMENT..... H272 MAY INTENSIFY FIRE; OXIDIZER. H302 HARMFUL IF SWALLOWED. H314 CAUSES SEVERE SKIN BURNS AND EYE DAMAGE. H318 CAUSES SERIOUS EYE DAMAGE. H335 MAY CAUSE RESPIRATORY IRRITATION. H410 VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS.

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. ... P260 DO NOT BREATHE DUST/FUME/GAS/MIST/VAPOURS/SPRAY. P264 WASH SKIN THOROUGHLY AFTER HANDLING. P270 DO NO EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT. P273 AVOID RELEASE TO THE ENVIRONMENT. P280 WEAR PROTECTIVE GLOVES/PROTECTIVE CLOTHING/EYE PROTECTION/FACE PROTECTION. P301+P312+P330 IF SWALLOWED: CALL A POISON CENTER OR DOCTOR/PHYSICIAN IF YOU FEEL UNWELL. RINSE MOUTH. P301+P330+P331 IF SWALLOWED: RINSE MOUTH. DO NOT INDUCE VOMITING. P303+P361+P353 IF ON SKIN (OR HAIR): REMOVE/TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/SHOWER. P304+P340+P310 IF INHALED: REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A POSITION COMFORTABLE FOR BREATHING. IMMEDIATELY CALL A POISON CENTER OR DOCTOR/PHYSICIAN. P305+P351+P338+P310 IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING. IMMEDIATELY CALL A POISON CENTER OR DOCTOR/PHYSICIAN. P363 WASH CONTAMINATED CLOTHING BEFORE REUSE. P370+P378 IN CASE OF FIRE: USE DRY SAND, DRY CHEMICAL OR ALCOHOL-RESISTANT FOAM FOR EXTINCTION. P391 COLLECT SPILLAGE. P403+P233 STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER TIGHTLY CLOSED. P405 STORE LOCKED UP. P501 DISPOSE OF CONTENTS/CONTAINER TO APPROPRIATE WASTE SITE OR RECLAIMER IN ACCORDANCE WITH LOCAL AND NATIONAL REGULATIONS.

OTHER HAZARDS..... CONTACT WITH ACIDS LIBERATES TOXIC GAS.

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**SECTION 03: COMPOSITION/INFORMATION ON INGREDIENTS**

HAZARDOUS INGREDIENTS	CAS #	WT. %
CALCIUM HYPOCHLORITE	7778-54-3	60-100
CALCIUM CHLORATE	10137-74-3	0-3
CALCIUM CARBONATE	471-34-1	1-5
CALCIUM HYDROXIDE	1305-62-0	1-5
SODIUM CHLORIDE	7647-14-5	10-30

**SECTION 04: FIRST AID MEASURES**

## DESCRIPTION OF FIRST AID MEASURES:

EYE CONTACT.....	IN CASE OF CONTACT WITH SUBSTANCE, IMMEDIATELY FLUSH EYES WITH RUNNING WATER FOR AT LEAST 20 MINUTES. REMOVE CONTACT LENSES, IF PRESENT AFTER THE FIRST 5 MINUTES. CONTINUE RINSING. CALL A POISON CONTROL CENTER OR DOCTOR FOR FURTHER TREATMENT ADVICE.
SKIN CONTACT.....	FOR MINOR SKIN CONTACT, AVOID SPREADING MATERIAL ON UNAFFECTED SKIN. IN CASE OF CONTACT WITH SUBSTANCE, IMMEDIATELY FLUSH SKIN WITH RUNNING WATER FOR AT LEAST 20 MINUTES. REMOVE AND ISOLATE CONTAMINATED CLOTHING. CALL A POISON CENTER OR DOCTOR FOR TREATMENT ADVICE.
INHALATION.....	MOVE VICTIM TO FRESH AIR. IF PERSON IS NOT BREATHING, CALL 911 OR AN AMBULANCE, THEN GIVE ARTIFICIAL RESPIRATION. DO NOT USE MOUTH-TO-MOUTH METHOD IF VICTIM INHALED THE SUBSTANCE; GIVE ARTIFICIAL RESPIRATION WITH THE AID OF A POCKET MASK EQUIPPED WITH A ONE-WAY VALVE OR OTHER PROPER RESPIRATORY MEDICAL DEVICE. CALL A POISON CONTROL CENTER OR DOCTOR FOR FURTHER TREATMENT ADVICE.
INGESTION.....	IF SWALLOWED, SEEK MEDICAL ATTENTION IMMEDIATELY FROM POISON CONTROL CENTER OR DOCTOR. HAVE A PERSON SIP A GLASS OF WATER, IF ABLE TO SWALLOW. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. DO NOT INDUCE VOMITING UNLESS TOLD TO DO SO BY THE POISON CONTROL CENTER OR DOCTOR.
MOST IMPORTANT SYMPTOMS AND ..... EFFECTS, ACUTE OR DELAYED:	IF INGESTION, IRRITATION, ANY TYPE OF OVEREXPOSURE OR SYMPTOMS OF OVEREXPOSURE OCCUR DURING, OR PERSISTS AFTER USE OF THIS PRODUCT, CONTACT A POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN IMMEDIATELY; HAVE SAFETY DATA SHEET INFORMATION AVAILABLE. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON. REFER TO SECTION 11 - TOXICOLOGICAL INFORMATION.
INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED	NOTES TO PHYSICIAN: PROBABLE MUCOSAL DAMAGE MAY CONTRAINDICATE THE USE OF GASTRIC LAVAGE. ALL TREATMENTS SHOULD BE BASED ON OBSERVED SIGNS AND SYMPTOMS OF DISTRESS IN THE PATIENT. CONSIDERATION SHOULD BE GIVEN TO THE POSSIBILITY THAT OVEREXPOSURE TO MATERIALS OTHER THAN THIS PRODUCT MAY HAVE OCCURRED.

**SECTION 05: FIRE FIGHTING MEASURES**

SUITABLE EXTINGUISHING MEDIA.....	DRENCH WITH LARGE QUANTITIES OF WATER ONLY.
UNSUITABLE EXTINGUISHING MEDIA.....	DO NOT USE DRY CHEMICALS OR FOAMS. PRODUCT SUPPLIES OWN OXYGEN, THEREFORE ATTEMPTS TO SMOTHER FIRE WITH A WET BLANKET, CARBON DIOXIDE, DRY CHEMICAL EXTINGUISHER OR OTHER MEANS ARE NOT EFFECTIVE. PRODUCT HAS THE POTENTIAL TO CAUSE A VIOLENT REACTION IF DRY CHEMICAL FIRE EXTINGUISHERS ARE USED.
SPECIAL HAZARDS ARISING FROM THE PRODUCT:	CONTAINERS MAY EXPLODE WHEN HEATED. MAY EXPLODE FROM HEAT OR CONTAMINATION. MAY IGNITE COMBUSTIBLES (WOOD, PAPER, OIL, CLOTHING, ETC.) RUNOFF MAY CREATE FIRE OR EXPLOSION HAZARD. SOME WILL REACT EXPLOSIVELY WITH HYDROCARBONS (FUELS). THESE SUBSTANCES WILL ACCELERATE BURNING WHEN INVOLVED IN A FIRE. EMITS TOXIC FUMES UNDER FIRE CONDITIONS. CHLORINE GAS MAY BE GENERATED.
HAZARDOUS COMBUSTION PRODUCTS.	DEPENDING ON CONDITIONS, DECOMPOSITION PRODUCTS MAY INCLUDE THE FOLLOWING MATERIALS: CARBON OXIDES; HALOGENATED COMPOUNDS; METAL OXIDE/OXIDES.
SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS:	STRUCTURAL FIREFIGHTERS' PROTECTIVE CLOTHING PROVIDES LIMITED PROTECTION IN FIRE SITUATIONS ONLY; IT IS NOT EFFECTIVE IN SPILL SITUATIONS WHERE DIRECT CONTACT WITH THE SUBSTANCE IS POSSIBLE. WEAR CHEMICAL PROTECTIVE CLOTHING THAT IS SPECIFICALLY RECOMMENDED BY THE MANUFACTURER. IT MAY PROVIDE LITTLE OR NO THERMAL PROTECTION. WEAR POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS (SCBA).

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**SECTION 05: FIRE FIGHTING MEASURES**

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS:

SMALL FIRES: MOVE CONTAINERS FROM FIRE AREA IF YOU CAN DO IT WITHOUT RISK. PROMPTLY ISOLATE THE SCENE BY REMOVING ALL PERSONS FROM THE VICINITY OF THE INCIDENT IF THERE IS A FIRE. NO ACTION SHALL BE TAKEN INVOLVING ANY PERSONAL RISK OR WITHOUT SUITABLE TRAINING. THIS MATERIAL IS VERY TOXIC TO AQUATIC ORGANISMS. FIRE WATER CONTAMINATED WITH THIS MATERIAL MUST BE CONTAINED AND PREVENTED FROM BEING DISCHARGED TO ANY WATERWAY, SEWER OR DRAIN.

**SECTION 06: ACCIDENTAL RELEASE MEASURES**

PERSONAL PRECAUTIONS.....

USE EXTREME CAUTION IN HANDLING SPILLED MATERIAL. VENTILATE THE AREA BEFORE ENTRY. USE SPARK-PROOF TOOLS AND EXPLOSION-PROOF EQUIPMENT. DO NOT WALK THROUGH SPILLED MATERIAL. DO NOT MIX THIS PRODUCT WITH ANY OTHER CHEMICALS, INCLUDING ANY OTHER POOL CHEMICALS OF ANY KIND, SUCH AS OTHER DISINFECTION OR "SHOCK" POOL PRODUCTS. CONTAMINATION WITH MOISTURE, ACIDS, ORGANIC MATTER, OTHER CHEMICALS (INCLUDING, BUT NOT LIMITED TO CLEANING CHEMICALS AND OTHER POOL CHEMICALS), PETROLEUM OR PAINT PRODUCTS OR OTHER EASILY COMBUSTIBLE MATERIALS MAY START A CHEMICAL REACTION WITH GENERATION OF HEAT, LIBERATION OF HAZARDOUS GASES AND POSSIBLE VIOLENT REACTION LEADING TO FIRE OR EXPLOSION. WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT, AVOID DIRECT CONTACT. DO NOT TOUCH DAMAGED CONTAINERS OR SPILLED MATERIAL UNLESS WEARING APPROPRIATE PROTECTIVE CLOTHING.

ENVIRONMENTAL PRECAUTIONS.....

PREVENT ENTRY INTO WATERWAYS, SEWERS, BASEMENTS OR CONFINED AREAS.

METHODS AND MATERIALS FOR ..... CONTAINMENT AND CLEANING UP

AVOID GENERATING DUST. IF FIRE OR DECOMPOSITION OCCURS IN AREA OF SPILL, IMMEDIATELY DOUSE WITH PLENTY OF WATER. OTHERWISE, SWEEP UP ALL VISIBLE MATERIAL USING A CLEAN (NEW, IF POSSIBLE), DRY SHOVEL AND BROOM AND IMMEDIATELY DISSOLVE MATERIAL IN A WATER-FILLED CONTAINER. SPILLED MATERIAL THAT HAS BEEN SWEEPED UP AND DISSOLVED IN WATER SHOULD BE USED IMMEDIATELY IN THE NORMAL APPLICATION FOR WHICH THIS PRODUCT IS BEING CONSUMED.

**SECTION 07: HANDLING AND STORAGE**

PRECAUTIONS FOR SAFE HANDLING:.....

USE EXTREME CAUTION IN HANDLING SPILLED MATERIAL. USE ONLY WITH ADEQUATE VENTILATION. KEEP AWAY FROM COMBUSTIBLE MATERIAL. STRONG OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE. USE SPARK-PROOF TOOLS AND EXPLOSION-PROOF EQUIPMENT. DO NOT MIX THIS PRODUCT WITH ANY OTHER CHEMICALS, INCLUDING ANY OTHER POOL CHEMICALS OF ANY KIND, SUCH AS OTHER DISINFECTION OR "SHOCK" POOL PRODUCTS. CONTAMINATION WITH MOISTURE, ACIDS, ORGANIC MATTER, OTHER CHEMICALS (INCLUDING, BUT NOT LIMITED TO CLEANING CHEMICALS AND OTHER POOL CHEMICALS), PETROLEUM OR PAINT PRODUCTS OR OTHER EASILY COMBUSTIBLE MATERIALS MAY START A CHEMICAL REACTION WITH GENERATION OF HEAT, LIBERATION OF HAZARDOUS GASES AND POSSIBLE VIOLENT REACTION LEADING TO FIRE OR EXPLOSION. ALWAYS ADD PRODUCT TO LARGE QUANTITIES OF WATER TO FULLY DISSOLVE PRODUCT. DO NOT POUR WATER INTO PRODUCT, ALWAYS ADD PRODUCT TO WATER. USE ONLY A CLEAN (NEW, IF POSSIBLE), DRY SCOOP MADE OF METAL OR PLASTIC EACH TIME PRODUCT IS TAKEN FROM THE CONTAINER. DO NOT USE WITH STABILIZED CHLORINE OR BROMINE TABLET CHEMICAL FEEDERS. DO NOT ADD THIS PRODUCT TO ANY DISPENSING DEVICE CONTAINING REMNANTS OF ANY OTHER PRODUCT OR POOL CHEMICAL. WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT, AVOID DIRECT CONTACT. DO NOT BREATHE DUST. DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING. DO NOT INGEST. WASH THOROUGHLY WITH SOAP AND WATER AFTER HANDLING AND BEFORE EATING, DRINKING, OR USING TOBACCO. EMPTY CONTAINERS RETAIN PRODUCT RESIDUE AND CAN BE HAZARDOUS. DO NOT REUSE CONTAINER. RESIDUAL MATERIAL REMAINING IN EMPTY CONTAINER CAN REACT TO CAUSE FIRE. THOROUGHLY FLUSH EMPTY CONTAINER WITH WATER THEN DESTROY BY PLACING IN TRASH COLLECTION. VENTILATE ENCLOSED AREAS. KEEP ONLY IN THE ORIGINAL CONTAINER. KEEP CONTAINER CLOSED. SEPARATE FROM ACIDS, ALKALIS, REDUCING AGENTS AND COMBUSTIBLES. PRODUCT IS AN NFPA CLASS 3 OXIDIZER WHICH CAN CAUSE A SEVERE INCREASE IN FIRE INTENSITY. STORE IN A COOL, DRY, WELL-VENTILATED PLACE. IF PRODUCT BECOMES CONTAMINATED OR DECOMPOSES DO NOT RESEAL CONTAINER. IF POSSIBLE ISOLATE CONTAINER IN OPEN AIR OR WELL-VENTILATED AREA.

CONDITIONS FOR SAFE STORAGE, ..... INCLUDING ANY INCOMPATIBILITIES:

VENTILATE ENCLOSED AREAS. KEEP ONLY IN THE ORIGINAL CONTAINER. KEEP CONTAINER CLOSED. SEPARATE FROM ACIDS, ALKALIS, REDUCING AGENTS AND COMBUSTIBLES. PRODUCT IS AN NFPA CLASS 3 OXIDIZER WHICH CAN CAUSE A SEVERE INCREASE IN FIRE INTENSITY. STORE IN A COOL, DRY, WELL-VENTILATED PLACE. IF PRODUCT BECOMES CONTAMINATED OR DECOMPOSES DO NOT RESEAL CONTAINER. IF POSSIBLE ISOLATE CONTAINER IN OPEN AIR OR WELL-VENTILATED AREA.

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## SECTION 08: EXPOSURE CONTROLS AND PERSONAL PROTECTION

INGREDIENTS	TWA	ACGIH TLV STEL	PEL	OSHA PEL STEL	REL NIOSH
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CALCIUM HYPOCHLORITE	N.AV.	N.AV.	N.AV.	N.AV.	N.AV.
CALCIUM CHLORATE	N.AV.	N.AV.	N.AV.	N.AV.	N.AV.
CALCIUM CARBONATE	N.AV.	N.AV.	N.AV.	N.AV.	N.AV.
CALCIUM HYDROXIDE	5 MG/M3	N.AV.	N.AV.	N.AV.	5 MG/M3
SODIUM CHLORIDE	N.AV.	N.AV.	N.AV.	N.AV.	N.AV.

APPROPRIATE ENGINEERING CONTROLS GOOD GENERAL VENTILATION SHOULD BE USED. VENTILATION RATES SHOULD BE MATCHED TO CONDITIONS. IF APPLICABLE, USE PROCESS ENCLOSURES, LOCAL EXHAUST VENTILATION, OR OTHER ENGINEERING CONTROLS TO MAINTAIN AIRBORNE LEVELS BELOW RECOMMENDED EXPOSURE LIMITS.

INDIVIDUAL PROTECTION MEASURE  
SUCH AS PERSONAL PROTECTIVE  
EQUIPMENTS:

HAND PROTECTION.....	CHEMICAL-RESISTANT, IMPERVIOUS GLOVES COMPLYING WITH AN APPROVED STANDARD SHOULD BE WORN AT ALL TIMES WHEN HANDLING CHEMICAL PRODUCTS IF A RISK ASSESSMENT INDICATES THIS IS NECESSARY. CONSIDERING THE PARAMETERS SPECIFIED BY THE GLOVE MANUFACTURER, CHECK DURING USE THAT THE GLOVES ARE STILL RETAINING THEIR PROTECTIVE PROPERTIES. IT SHOULD BE NOTED THAT THE TIME TO BREAKTHROUGH FOR ANY GLOVE MATERIAL MAY BE DIFFERENT FOR DIFFERENT GLOVE MANUFACTURERS. IN THE CASE OF MIXTURES, CONSISTING OF SEVERAL SUBSTANCES, THE PROTECTION TIME OF THE GLOVES CANNOT BE ACCURATELY ESTIMATED. GLOVES: NITRILE, NEOPRENE, AND BUTYL RUBBER.
RESPIRATORY PROTECTION.....	IF WORKERS ARE EXPOSED TO CONCENTRATIONS ABOVE THE EXPOSURE LIMIT, THEY MUST USE APPROPRIATE, CERTIFIED RESPIRATORS. USE A PROPERLY FITTED, AIR-PURIFYING OR AIR-FED RESPIRATOR COMPLYING WITH AN APPROVED STANDARD IF A RISK ASSESSMENT INDICATES THIS IS NECESSARY. RESPIRATOR SELECTION MUST BE BASED ON KNOWN OR ANTICIPATED EXPOSURE LEVELS, THE HAZARDS OF THE PRODUCT AND THE SAFE WORKING LIMITS OF THE SELECTED RESPIRATOR.
EYE PROTECTION.....	CHEMICAL SPLASH GOGGLES AND FACE SHIELD.
PROTECTIVE FOOTWEAR.....	WEAR APPROPRIATE PROTECTIVE FOOTWEAR TO PREVENT EXPOSURE.
PROTECTIVE CLOTHING.....	WEAR SUITABLE PROTECTIVE CLOTHING. PERSONAL PROTECTIVE EQUIPMENT FOR THE BODY SHOULD BE SELECTED BASED ON THE TASK BEING PERFORMED AND THE RISKS INVOLVED AND SHOULD BE APPROVED BY A SPECIALIST BEFORE HANDLING THIS PRODUCT.
OTHER.....	EYEWASH STATION AND SAFETY SHOWER IN WORK AREA.
HYGIENIC PRACTICES.....	WASH HANDS, FOREARMS AND FACE THOROUGHLY AFTER HANDLING CHEMICAL PRODUCTS, BEFORE EATING, SMOKING AND USING THE LAVATORY AND AT THE END OF THE WORKING PERIOD. APPROPRIATE TECHNIQUES SHOULD BE USED TO REMOVE POTENTIALLY CONTAMINATED CLOTHING. WASH CONTAMINATED CLOTHING BEFORE REUSING. ENSURE THAT EYEWASH STATIONS AND SAFETY SHOWERS ARE CLOSE TO THE WORKSTATION LOCATION.
OTHER.....	ENVIRONMENTAL EXPOSURE CONTROLS SHOULD BE ENGINEERED TO PREVENT RELEASE TO THE ENVIRONMENT, INCLUDING PROCEDURES TO PREVENT SPILLS, ATMOSPHERIC RELEASE AND RELEASE TO WATERWAYS. FOLLOW BEST PRACTICE FOR SITE MANAGEMENT AND DISPOSAL OF WASTE.

## SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE.....	SOLID.
COLOR.....	VARIOUS COLORS.
ODOUR.....	SLIGHT CHLORINE.
ODOUR THRESHOLD	
PH.....	ALKALINE.
MELTING/FREEZING POINT	
BOILING POINT/BOILING RANGE.....	170 TO 180 C (338 TO 356 F) DECOMPOSES.
FLASH POINT (C), METHOD.....	N.AP.
EVAPORATION RATE.....	N.AP.
FLAMMABILITY (SOLIDS AND GASES).....	N.AV.
UPPER FLAMMABLE LIMIT (% BY VOL.)...	N.AP.
LOWER FLAMMABLE LIMIT (% BY VOL.)...	N.AP.
VAPOUR PRESSURE (MMHG).....	N.AV.
VAPOUR DENSITY (AIR=1).....	N.AV.
RELATIVE DENSITY.....	BULK DENSITY: 63-67 LBS/FT3 (1 - 1.07 G/CM3).

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**SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES**

SOLUBILITY IN WATER (% W/W)..... SOLUBLE 100 %.  
 PARTITION COEFFICIENT ..... N.AV.  
 (N-OCTANOL/WATER)  
 AUTO IGNITION TEMPERATURE..... N.AV.  
 DECOMPOSITION TEMPERATURE..... 170 TO 180 C (338 TO 356 F).  
 VISCOSITY..... NO DATA.

**SECTION 10: STABILITY AND REACTIVITY**

REACTIVITY:..... NO DANGEROUS REACTION KNOWN UNDER CONDITIONS OF NORMAL USE.  
 CHEMICAL STABILITY:..... THE PRODUCT MAY NOT BE STABLE UNDER CERTAIN CONDITIONS OF STORAGE OR USE. PRODUCT DECOMPOSES AT APPROXIMATELY 170-180°C (338-356°F) RELEASING OXYGEN GAS AND SOME CHLORINE GAS.  
 POSSIBILITY OF HAZARDOUS REACTIONS:..... HAZARDOUS REACTIONS OR INSTABILITY MAY OCCUR UNDER CERTAIN CONDITIONS OF STORAGE OR USE. CONDITIONS MAY INCLUDE THE FOLLOWING: CONTACT WITH COMBUSTIBLE MATERIALS, CONTACT WITH ACIDS/AMMONIA. REACTIONS MAY INCLUDE THE FOLLOWING: RISK OF CAUSING OR INTENSIFYING FIRE, LIBERATION OF TOXIC GAS.  
 CONDITIONS TO AVOID..... HEATING MAY CAUSE A FIRE OR EXPLOSION. EXCESSIVE HEAT WILL CAUSE DECOMPOSITION RESULTING IN THE RELEASE OF OXYGEN AND CHLORINE GAS.  
 INCOMPATIBLE MATERIALS:..... HIGHLY REACTIVE OR INCOMPATIBLE WITH THE FOLLOWING MATERIALS: MOISTURE, COMBUSTIBLE MATERIALS, ORGANIC MATERIALS, METALS, ACIDS, ALKALIS, OXIDIZING MATERIALS, REDUCING MATERIALS, AMMONIA, PETROLEUM PRODUCTS, PAINT PRODUCTS, WOOD AND PAPER, AND POOL CHEMICALS. ACID OR AMMONIA CONTAMINATION WILL RELEASE TOXIC GASES.  
 HAZARDOUS PRODUCTS OF DECOMPOSITION ..... PRODUCT SLOWLY RELEASES CHLORINE GAS.

**SECTION 11: TOXICOLOGICAL INFORMATION**

INGREDIENTS	LC50	LD50
CALCIUM HYPOCHLORITE	N.AV.	850 MG/KG (ORAL, RAT); >1000 MG/KG (DERMAL, RABBIT)
CALCIUM CHLORATE	N.AV.	N.AV.
CALCIUM CARBONATE	N.AV.	N.AV.
CALCIUM HYDROXIDE	N.AV.	7340 MG/KG (ORAL, RAT)
SODIUM CHLORIDE	N.AV.	3000 MG/KG (ORAL, RAT)
INFORMATION ON LIKELY ROUTES OF ENTRY:		
INHALATION.....	MAY CAUSE CORROSIVE BURNS - IRREVERSIBLE DAMAGE. MAY CAUSE RESPIRATORY IRRITATION.	
INGESTION.....	HARMFUL OR FATAL IF SWALLOWED. MAY CAUSE IRREVERSIBLE DAMAGE TO MUCOUS MEMBRANES.	
SKIN CONTACT.....	CAUSES SEVERE SKIN BURNS.	
SKIN ABSORPTION.....	N.AV.	
EYE CONTACT.....	CAUSES SERIOUS EYE DAMAGE. DIRECT CONTACT WITH THE EYES CAN CAUSE IRREVERSIBLE DAMAGE, INCLUDING BLINDNESS.	
EFFECTS OF ACUTE EXPOSURE.....	SEE ABOVE.	
EFFECTS OF CHRONIC EXPOSURE.....	REPEATED OR PROLONGED EXPOSURE THROUGH INHALATION TO CORROSIVE FUMES MAY CAUSE BRONCHIAL IRRITATION WITH CHRONIC COUGH. REPEATED OR PROLONGED EXPOSURE OF THE SKIN TO CORROSIVE MATERIALS WILL CAUSE DERMATITIS. REPEATED OR PROLONGED EXPOSURE OF THE EYES TO CORROSIVE MATERIALS OR FUMES MAY CAUSE CONJUNCTIVITIS. REPEATED OR PROLONGED EXPOSURE TO CORROSIVE MATERIALS OR FUMES MAY CAUSE GASTROINTESTINAL DISTURBANCES.	
SIGNS AND SYMPTOMS OF OVEREXPOSURE .....	ADVERSE SYMPTOMS MAY INCLUDE THE FOLLOWING - INHALATION: RESPIRATORY TRACT IRRITATION, COUGHING, BREATHING DIFFICULTY OR SHORTNESS OF BREATH, PULMONARY EDEMA. INGESTION: STOMACH PAINS, NAUSEA OR VOMITING, GASTRIC PERFORATION. SKIN: PAIN OR IRRITATION, REDNESS, BLISTERING MAY OCCUR. EYES: PAIN, WATERING, REDNESS, CORNEA OPACITY, DIRECT CONTACT WITH THE EYES CAN CAUSE IRREVERSIBLE DAMAGE, INCLUDING BLINDNESS.	
CARCINOGENICITY OF MATERIAL.....	CALCIUM HYPOCHLORITE - IARC: 3.	
TERATOGENICITY.....	N.AV.	
MUTAGENICITY.....	N.AV.	
REPRODUCTIVE EFFECTS.....	N.AV.	
SENSITIZING CAPABILITY OF MATERIAL.....	N.AV.	

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**SECTION 11: TOXICOLOGICAL INFORMATION**

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**

INFORMATION ON SAFE HANDLING FOR DISPOSAL AND METHODS OF DISPOSAL, INCLUDING ANY CONTAMINATED PACKAGING DISPOSE OF IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, PROVINCIAL, AND LOCAL ENVIRONMENTAL REGULATIONS.

**SECTION 14: TRANSPORT INFORMATION**

UN NUMBER..... 2880.  
 PROPER SHIPPING NAME..... CALCIUM HYPOCHLORITE, HYDRATED.  
 TDG CLASSIFICATION..... 5.1.  
 PACKING GROUP..... II.  
 ENVIRONMENTAL HAZARDS ACCORDING TO THE INTERNATIONAL MARITIME DANGEROUS GOODS CODE AND THE UNITED NATIONS MODEL REGULATIONS:  
 TRANSPORT IN BULK..... N.AP.  
 SPECIAL PRECAUTIONS IN CONNECTION WITH TRANSPORT OR CONVEYANCE EITHER WITHIN OR OUTSIDE THE PREMISES: MARINE POLLUTANT.

**SECTION 15: REGULATORY INFORMATION**

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

**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  
 PREPARATION DATE..... JAN 1/2024