Product ID: HTH DRY CHLORINE GRANULAR MSDS Date:08/01/1994 FSC:6810 NIIN:00-255-0471 Status Code:A MSDS Number: CJLNV === Responsible Party === Company Name: OLIN CORP CHEMICALS GROUP Address:120 LONG RIDGE RD City:STAMFORD State:CT ZIP:06904 Country:US Info Phone Num:203-356-3449 Emergency Phone Num:203-356-3449/800-OLIN-911 Resp. Party Other MSDS Num .: CPE00002.0117 CAGE:53084 === Contractor Identification === Company Name: LOS ANGELES CHEMICAL CO Address:4545 ARDINE ST Box:1987 **City:SOUTH GATE** State:CA ZIP:90280 Country:US Phone:213-562-9500 CAGE:75656 Company Name: OLIN CORP CHEMICALS GROUP Address:120 LONG RIDGE RD City:STAMFORD State:CT ZIP:06904 Country:US Phone:203-356-3449,CHEMTREC 800-242-9300 CAGE:53084

Ingred Name:CALCIUM HYPOCHLORITE (CERCLA) CAS:7778-54-3 RTECS #: NH3485000 Minumum % Wt:65. Maxumum % Wt:75. Other REC Limits:NONE RECOMMENDED EPA Rpt Qty:10 LBS DOT Rpt Qty:10 LBS

Ingred Name:SODIUM CHLORIDE CAS:7647-14-5 RTECS #:VZ4725000 Minumum % Wt:10. Maxumum % Wt:20. Other REC Limits:NONE RECOMMENDED

Ingred Name:CALCIUM CHLORATE CAS:10137-74-3 RTECS #:FN9800000 Minumum % Wt:0. Maxumum % Wt:5. Other REC Limits:NONE RECOMMENDED

Ingred Name:CALCIUM CHLORIDE CAS:10043-52-4 RTECS #:EV9800000 Minumum % Wt:0. Maxumum % Wt:5. Other REC Limits:NONE RECOMMEND ED

Ingred Name:CALCIUM HYDROXIDE CAS:1305-62-0 RTECS #:EW2800000 Minumum % Wt:0. Maxumum % Wt:4. Other REC Limits:NONE RECOMMENDED OSHA PEL:5 MG/M3 ACGIH TLV:5 MG/M3

Ingred Name:CALCIUM CARBONATE CAS:471-34-1 RTECS #:FF9335000 Minumum % Wt:0. Maxumum % Wt:4. Other REC Limits:NONE RECOMMENDED OSHA PEL:15 MG/M3 (TDUST) OSHA STEL:5 MG/M3 (RESP) ACGIH TLV:10 MG/M3

Ingred Name:WATER CAS:7732-18-5 RTECS #:ZC0110000 Minumum % Wt:5.5 Maxumum % Wt:10. Other REC Limits:NONE RECOMMENDED OSHA PEL:NOT REL LD50 LC50 Mixture:LD50 (ORAL, RAT) IS 850 MG/KG. Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO Health Hazards Acute and Chronic: TARGET ORGANS: EYES. SKIN. RESPIRATORY SYSTEM (HMIS). ACUTE - INHALATION: INHALATION OF THIS MATERIAL IS IRRITATING TO NOSE, THROAT AND LUNGS. MAY ALSO CAUSE BURNS TO RESPIRATORY TRACT WITH LUNG ED EMA, SHORTNESS OF BREATH, WHEEZING, CHOCKING, CHEST PAIN, PERMANENT LUNG DAMAGE. EYE: SEVERE IRRITATION AND/OR BURNS, CORNEAL DAMAGE. SKIN: CAN CAUSE SEVERE IRRITATION AND/OR BURNS, REDNESS, SWELLING. PRO LONGED SKIN CONTACT MAY CAUSE DESTRUCTION OF DERMIS. INGESTION: IRRITATION AND/OR BURNS OF ENTIRE GI TRACT, NAUSEA, VOMITING, DIARRHEA, ABDOMINAL PAIN, BLEEDING AND/OR TISSUE ULCERATION. CHRONIC- TISS UE DESTRUCTION, LUNG AND CORNEAL DAMAGE. Explanation of Carcinogen icity: THIS PRODUCT IS NOT KNOWN OR REPORTED TO BE CARCINOGENIC BY ANY REFERENCE SOURCE INCLUDING IARC, OSHA, NTP, OR EPA. Effects of Overexposure: THIS MATERIAL IS IRRITATING TO NOSE, THROAT AND LUNGS. MAY ALSO CAUSE BURNS TO RESPIRATORY TRACT WITH LUNG EDEMA, SHORTNESS OF BREATH, WHEEZING, CHOCKING, CHEST PAIN, PERMANENT LUNG DAMAGE. SEVERE EYE IRRITATION AND/OR BURNS, CORNEAL DAMAGE. CAN CAUSE SEVERE SKIN IRRITATION AND/OR BURNS, REDNESS, SWELLING, PROLONGED SKIN CON TACT MAY CAUSE DESTRUCTION OF DERMIS. INGESTION CAN CAUSE IRRITATION AND/O R BURNS OF ENTIRE GASTROINTESTINAL TRACT INCLUDING STOMACH AND INTESTINE, NAUSEA, VOMITING, DIARRHEA, ABDOMINAL PAIN, BLEEDING AND/OR TISSUE ULCERATION.

Medical Cond Aggravated by Exposure:ASTHMA, RESPIRATORY AND CARDIOVASCULAR DISEASES

First Aid:EYES: IMMEDIATELY FLUSH WITH LARGE AMOUNT OF WATER FOR AT LEAST15 MINUTES, OCCASIONALLY

LIFTING UPPER AND LOWER EYELIDS. CALL A PHYSICIAN AT ONCE. SKIN: IMMEDIATELY FLUSH WITH WATER FOR AT LEAST 15 MI NUTES. CALL A PHYSICIAN. REMOVE CONTAMINATED CLOTHING AND LAUNDER BEFORE REUSE. INGESTION: IMMEDIATELY DRINK LARGE QUANTITIES OF WATER. DO NOT INDUCE VOMITING. CALL A PHYSICIAN AT ONCE. DO NOT GIVE A NYTHING BY MOUTH IF THE PERSON IS UNCONSCIOUS OR IF HAVING CONVULSIONS. INHALATION: REMOVE VICTIM TO FRESH AIR. SUPPORT RESPIRATION IF NEEDED. CALL A PHYSICI AN.

Flash Point:NONE Lower Limits:NOT RELEVANT Upper Limits:NOT RELEVANT Extinguishing Media:NOT APPLICABLE. Fire Fighting Procedures:USE WATER TO COOL CONTAINERS EXPOSED TO FIRE. DO NOT USE DRY EXTINGUISHERS CONTAINING AMMONIUM COMPOUNDS.

Spill Release Procedures:REMOVE ALL SOURCES OF IGNITION. STOP SOURCE OF SPILL AS SOON AS POSSIBLE AND NOTIFY A PPROPRIATE PERSONNEL.

CONTAINERIZE ALL VIRGIN MATERIAL IN A CLEAN DRY CONTAINER USING CLEAN DEDICATED EQUIPMENT TO CLEAN UP MATERIAL. CONTAINERIZE ALL CONTAMINATED MATERIAL IN A CLEAN DRY CONTAINER AND REMOVE TO A WELL VENTILATED AREA BEING SURE NOT TO SEAL TIGHTLY. CONTAMINATED SPILL MAY BECOME A HAZARDOUS WASTE. Neutralizing Agent:N/P. WEAK OR DILUTE ACID (HMIS)

Handling and Storage Precautions: KEEP TIGH TLY SEALED. STORE IN COOL,

DRY, WELL-VENTILATED AREA. DO NOT STORE AT TEMPERATURES ABOVE 52C (125F).

Other Precautions:DO NOT TAKE INTERNALLY. AVOID CONTACT WITH EYES, SKIN OR CLOTHING. UPON CONTACT WITH SKIN OR EYES, WASH OFF WITH WATER.

======= Exposure Controls/Personal Protection ==========

Respiratory Protection:WEAR NIOSH/MSHA APPROVED RESPIRATOR. Ventilation:USE LOCAL EXHAUST VENTILATION TO MINIMIZE DUST AND CHLORINE LEVELS.

Protective Gloves:NEOPRENE, PVC, RU

BBER

Eye Protection:CHEMICAL GOGGLES
Other Protective Equipment:IMPERMEABLE SUIT TO AVOID SKIN & EYE CONTACT. NEOPRENE OR PVC BOOTS NEOPRENE OR PVC APRON. FACE SHIELD &/OR PROTECTIVE SUIT NOT NORMALLY REQUIRED.
Work Hygienic Practices:OBSERVE GOOD INDUSTRIAL HYGIENE PRACTICES AND RECOMMENDED PROCEDURES. WASH THOROUGHLY BEFORE EATING, DRINKING/SMOKING.
Supplemental Safety and Health

HCC:D1 NRC/State Lic Num:NOT RELEVANT Decomp Temp:=176.7C, 350.F Spec Gravity:0.8 pH:10.5-11.5 (1%) Solubility in Water:18% @ 25C/77F Appearance and Odor:WHITE FREE FLOWING POWDER WITH CHLORINE-LIKE ODOR

Stability Indicator/Materials to Avoid:YES
ACIDS, ORGANICS, NITROGEN CONTAINING COMPOUNDS, FLAMMABLE OR COMBUSTIBLE MATERIALS, DRY POWDER FIRE EXTINGUISHER (CONTAINING MONO-AMMONIUM PHOSPHATE), AND CORROSIVE.
Stability Condition to Avoid:TEMPERAT
URES ABOVE 125F/52C, HIGH HUMIDITY
Hazardous Decomposition Products:CHLORINE GAS
Conditions to Avoid Polymerization:WILL NOT OCCUR

Toxicological Information:DERMAL LD50: > 2 G/KG (RABBIT). INHALATION LC50: APPROXIMATELY 1700 MG/CUBIC METER FOR 1 HOUR IN THE RAT BASED ON ACUTE TOXICITY FOR CHLORINE.

Waste Disposal Methods: IF THIS PRODUCT BECOMES A WA

STE, IT MEETS CRITERIA OF A HAZARDOUS WASTE AS DEFINED UNDER 40 CFR 261 AND WOULD HAVE EPA HAZARDOUS WASTE NUMBER D001. IF THIS PRODUCT BECOMES A WASTE, IT WILL BE A HAZARD OUS WASTE WHICH IS SUBJECT TO LAND DISPOSAL RESTRICTIONS UNDER 40 CFR 268 AND MUST BE MANAGED ACCORD INGLY.

SARA Title III Information:PER 40 CFR 370.2: HEALTH: IMMEDIATE (ACUTE). PHYSICAL: FIRE AND REACTIVITY. Federal Regulatory In formation:THIS SUBSTANCE IS LISTED ON THE TOXIC SUBSTANCE CONTROL ACT (TSCA) INVENTORY. REGULATED UNDER FIFRA, USDA AND FDA.

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