

ARCH CHEMICALS, INC. -- HTH DRY CHLORINE GRANULAR -- 6810-01-358-4336

===== Product Identification =====

Product ID:HTH DRY CHLORINE GRANULAR

MSDS Date:10/21/1999

FSC:6810

NIIN:01-358-4336

Status Code:A

MSDS Number: CKDCS

=== Responsible Party ===

Company Name:ARCH CHEMICALS, INC.

Address:501 MERRITT 7

Box:5204

City:NORWALK

State:CT

ZIP:06856-5204

Country:US

Info Phone Num:800-511-MSDS

Emergency

Phone Num:1-800-654-6911

Resp. Party Other MSDS Num.:00002-0182-14432

Preparer's Name:NOT PROVIDED.

Chemtrec Ind/Phone:(800)424-9300

CAGE:TO530

=== Contractor Identification ===

Company Name:ARCH CHEMICALS, INC.

Address:501 MERRITT 7

Box:5204

City:NORWALK

State:CT

ZIP:06856-5204

Country:US

Phone:800-511-MSDS

CAGE:TO530

Company Name:TELECHEM INTERNATIONAL, INC

Address:524 E WEDDELL DRIVE SUITE 3

Box:City:SUNNYVALE

State:CA

ZIP:94089-2115

Country:US

Phone:916-941-3688

Contract Num:SP0450-00-M-D590

CAGE:1KH20

=====
===== Composition/Information on Ingredients =====

Ingred Name:CALCIUM HYPOCHLORITE

CAS:7778-54-3

RTECS #:NH3485000

Minumum % Wt:60.

Maxumum % Wt:80.

Other REC Limits:C 3 MG/M3 (CL), MFR

OSHA PEL:NOT PROVIDED.

ACGIH TLV:NOT PROVIDED.

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:NOT PROVIDED.

OSHA PEL:NOT ESTABLISHED.

ACGIH TLV:NOT ESTABLISHED.

Ingred Name:CALC

IUM CHLORATE

CAS:10137-74-3

RTECS #:FN9800000

Minumum % Wt:0.

Maxumum % Wt:5.

Other REC Limits:NOT PROVIDED.

OSHA PEL:NOT ESTABLISHED.

ACGIH TLV:NOT ESTABLISHED.

Ingred Name:CALCIUM CHLORIDE

CAS:10043-52-4

RTECS #:EV9800000

Minumum % Wt:0.

Maxumum % Wt:5.

Other REC Limits:NOT PROVIDED.

OSHA PEL:NOT ESTABLISHED.

ACGIH TLV:NOT ESTABLISHED.

Ingred Name:CALCIUM HYDROXIDE

CAS:1305-62-0

RTECS #:EW2800000

Minumum % Wt:0.

Maxumum % Wt:4.

Other REC Limits:NOT PROVIDED.

OSHA PEL:15 MG/M3

ACGIH TLV:5 MG/

M3

Ingred Name:CALCIUM CARBONATE

CAS:471-34-1

RTECS #:FF9335000

Minumum % Wt:0.

Maxumum % Wt:5.

Other REC Limits:NOT PROVIDED.

OSHA PEL:15 MG/M3 TDUST

ACGIH TLV:10 MG/M3 TDUST

Ingred Name:WATER

CAS:7732-18-5

RTECS #:ZC0110000

Minumum % Wt:5.5

Maxumum % Wt:10.

Other REC Limits:NOT PROVIDED.

OSHA PEL:NOT ESTABLISHED.

ACGIH TLV:NOT ESTABLISHED.

===== Hazards Identification =====

LD50 LC50 Mixture:LD50 (ORAL, RAT) 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:ACUTE: INHALATION: DUST/VAPOR CAN BE IRRITATING TO NOSE, MOUTH, THROAT, AND LUNGS. IN CONFINED AREAS, REACTION WITH INCOMPATIBLES CAN RESULT IN HIGH CONCENTRATIONS OF CHLORINE VAPOR WHICH MAY RESULT I N BURNS TO REPIRATORY TRACT, PRODUCING LUNG EDEMA, SHORTNESS OF BREATH, WHEEZING, CHOKING, CHEST PAINS. EYE: SEVERE IRRITATION AND/OR BURNS, CORNEAL DAMAGE. SKIN: SEVERE

IRRITATION AND/OR BURNS, REDNE SS, SWELLING. INGESTION: IRRITATION AND/OR BURNS CAN OCCUR TO THE ENTIRE GASTROINTESTINAL TRACT, CHARACTERIZED BY NAUSEA, VOMITING, DIARRHEA, ABDOMINAL PAIN, BLEEDING, AND/OR TISSUE ULCERATION. MAY BE FATAL. CHRONIC: LUNG AND TISSUE DAMAGE.

Explanation of Carcinogenicity:THIS PRODUCT IS NOT KNOWN OR REPORTED TO BE CARCINOGENIC BY ANY REFERENCE SOURCE, INCLUDING IARC, OSHA, NTP OR EPA.

Effects of Overexposure:DUST/VAPOR CAN BE IRRITATING TO N

NOSE, MOUTH, THROAT, AND LUNGS. IN CONFINED AREAS, REACTION WITH INCOMPATIBLES CAN RESULT IN HIGH CONCENTRATIONS OF CHLORINE VAPOR WHICH MAY RESULT IN BURNS TO RESPIRATORY TRACT, PRODUCING LUNG EDEMA, SHORTNESS OF BREATH, WHEEZING, CHOKING, CHEST PAINS. EYE: SEVERE IRRITATION AND/OR BURNS, CORNEAL DAMAGE. SKIN: SEVERE IRRITATION AND/OR BURNS, REDNESS, SWELLING. INGESTION: IRRITATION AND/OR BURNS CAN OCCUR TO THE ENTIRE GASTROINTESTINAL TRACT, CHARACTERIZED BY NAUSEA,

VOMITING, DIARRHEA, ABDOMINAL PAIN, BLEEDING, AND/OR TISSUE ULCERATION.

Medical Condition Aggravated by Exposure: ASTHMA, RESPIRATORY AND CARDIOVASCULAR DISEASE.

===== First Aid Measures =====

First Aid: EYES: IMMEDIATELY FLUSH WITH LARGE AMOUNT OF WATER FOR AT LEAST 15 MINUTES, OCCASIONALLY LIFTING THE UPPER AND LOWER EYELIDS. CALL A PHYSICIAN AT ONCE. SKIN: IMMEDIATELY FLUSH WITH WATER FOR AT LEAST 15 MINUTES. CALL A PHYSICIAN. IF CLOTHING COMES IN CONTACT

WITH THE PRODUCT, IT SHOULD BE REMOVED IMMEDIATELY AND LAUNDERED BEFORE REUSE. INGESTION: IMMEDIATELY DRINK LARGE QUANTITIES OF WATER. DO NOT INDUCE VOMITING. CALL A PHYSICIAN AT ONCE. DO NOT GIVE ANYTHING BY MOUTH IF THE PERSON IS UNCONSCIOUS OR IF HAVING CONVULSIONS. INHALATION: REMOVE VICTIM TO FRESH AIR. SUPPORT RESPIRATION IF NEEDED. CALL A PHYSICIAN.

===== Fire Fighting Measures =====

Flash Point: NOT APPLICABLE.

Extinguishing Media: WATER ONLY.

Fire Fighting Procedures: USE WATER TO COOL CONTAINERS EXPOSED TO FIRE. RESPONSE TO THIS MATERIAL REQUIRES THE USE OF A FULL ENCAPSULATED SUIT AND A NIOSH APPROVED POSITIVE PRESSURE SUPPLIED AIR RESPIRATOR. DO NOT USE DRY EXTINGUISHERS CONTAINING AMMONIUM COMPOUNDS.

Unusual Fire/Explosion Hazard: THIS PRODUCT IS CHEMICALLY REACTIVE WITH MANY SUBSTANCES. ANY CONTAMINATION OF THE PRODUCT WITH OTHER SUBSTANCES BY SPILL OR OTHERWISE MAY RESULT

T IN A CHEMICAL REACTION

AND FIRE. THIS PRODUCT IS A STRONG OXIDIZER WHICH IS CAPABLE OF INTENSIFYING A FIRE ONCE STARTED.

===== Accidental Release Measures =====

Spill Release Procedures: REMOVE ALL SOURCES OF IGNITION. STOP SOURCE OF SPILL. NOTIFY APPROPRIATE PERSONNEL. CONTACT AT 1-800-654-6911 IMMEDIATELY. SPILLS SHOULD BE TREATED AS CONTAMINATED. MAY IGNITE COMBUSTIBLE MATERIALS. USING A CLEAN BROOM OR SHOVEL, PLACE SPILLS INTO PLASTIC

BAGS. DO NOT SEAL TIGHTLY. REMOVE TO OUTDOORS. USE A FULL ENCAPSULATED SUIT AND A NIOSH APPROVED POSITIVE PRESSURE SUPPLIED AIR RESPIRATOR.

Neutralizing Agent: NOT PROVIDED.

===== Handling and Storage =====

Handling and Storage Precautions: KEEP PRODUCT TIGHTLY SEALED IN ORIGINAL CONTAINERS. STORE IN A COOL, DRY, WELL-VENTILATED AREA AWAY FROM COMBUSTIBLES/FLAMMABLES. KEEP PACKAGING FREE OF CONTAMINATION. DO NOT STORE ABOVE 52C/125F SINCE I

T MAY CAUSE

DECOMPOSITION, EVOLUTION OF CHLORINE GAS AND HEAT SUFFICIENT TO IGNITE COMBUSTIBLES.

Other Precautions: DO NOT TAKE INTERNALLY. AVOID INHALATION OF DUST AND FUMES. AVOID CONTACT WITH EYES, SKIN, AND CLOTHING. UPON CONTACT WITH SKIN OR EYES, WASH OFF WITH WATER. REMOVE AND WASH CONTAMINATED CLOTHING BEFORE REUSE.

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

Respiratory Protection: WEAR NIOSH APPROVED RESPIRATOR IF DUSTS ARE CREATED. WHEN

APPLICABLE, WEAR NIOSH APPROVED FULL FACE-PIECE RESPIRATOR WITH CHLORINE CARTRIDGES AND DUST/MIST PREFILTER.

Ventilation: USE LOCAL EXHAUST VENTILATION TO MINIMIZE DUST AND CHLORINE LEVELS WHERE INDUSTRIAL USE OCCURS. OTHERWISE, ENSURE GOOD GENERAL VENTILATION.

Protective Gloves: WEAR NEOPRENE GLOVES TO AVOID SKIN CONTACT.

Eye Protection: WEAR SAFETY GLASSES TO AVOID EYE CONTACT.

Other Protective Equipment: WEAR NEOPRENE BOOTS, APRON, PROTECTIVE SUIT.

Work Hygienic Practices: NOT PROVIDED

D.
Supplemental Safety and Health
WHERE INDUSTRIAL USE OCCURS, CHEMICAL GOGGLES OR FULL IMPERMEABLE SUIT
MAY BE REQUIRED.

===== Physical/Chemical Properties =====

HCC:D1
NRC/State Lic Num:NOT RELEVANT.
Boiling Pt:B.P. Text:NOT APPLICABLE.
Melt/Freeze Pt:M.P/F.P Text:NOT APPLICABLE.
Decomp Temp:Decomp Text:338-356F
Vapor Pres:NOT APPLICABLE.
Spec Gravity:0.8
pH:10.4-10.8 (1%)
Viscosity:NOT APPLICABLE.
Evaporation Rate & Reference:NOT APPLICABLE.
Solubility in
Water:APPROXIMATELY 18% @25C
Appearance and Odor:WHITE, FREE FLOWING POWDER. CHLORINE-LIKE ODOR.
Percent Volatiles by Volume:NOT RELEVANT
Corrosion Rate:NOT PROVIDED.

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES
CHEMICALLY REACTIVE WITH MANY SUBSTANCES, INCLUDING, E.G., OTHER POOL
TREATMENT PRODUCTS, ACIDS, ORGANICS, NITROGEN-CONTAINING COMPOUNDS,
DRY POWDER FIRE EXTINGUISHERS (CONTAINING MONO-AMMONIUM PHOSPHATE),
OXIDIZERS, CORROS
Stability Condition to Avoid:STORAGE AT TEMPERATURES >125 DEG. F (52
DEG. C) PREVENT INGRESS OF HUMIDITY AND MOISTURE INTO CONTAINER OR
PACKAGE. ALWAYS CLOSE THE LID. TEMPERATURES > 170C/338F.
Hazardous Decomposition Products:CHLORINE GAS.
Conditions to Avoid Polymerization:WILL NOT OCCUR.

===== Toxicological Information =====

Toxicological Information:INHALATION LC50: APPROXIMATELY 1300 MG/M3 (1
HR., RAT) - BASED ON ACUTE INHALATION TO

TOXICITY FOR CHLORINE. DERMAL
LD50>2 G/KG (RABBIT)

===== Ecological Information =====

Ecological:AQUATIC TOXICITY: BLUEGILL, 96 HR, LC50: 0.088 MG/L
(NOMINAL, STATIC). RAINBOW TROUT, 96 HR. LC50: 0.16 MG/L (NOMINAL,
STATIC). DAPHNIA MAGNA, 48 HR. LC50: 0.11 MG/L (NOMINAL, STATIC).
TOXICITY TO WILDLIFE: BOBWHITE QUAIL, DIETARY LC50: > 5,000 PPM.
MALLARD DUCKLINGS, DIETARY LC50: > 5,000 PPM. BOBWHITE QUAIL, ORAL
LD50: 3474 MG/KG.

===== Disposal Considerations =====

Waste Disposal Methods:IF THIS PRODUCT BECOMES A WASTE, IT MEETS
CRITERIA OF A HAZARDOUS WASTE AS DEFINED UNDER 40 CFR 261 WITH EPA
HAZARDOUS WASTE NUMBER D001 AND IS SUBJECT TO LAND DISPOSAL
RESTRICTIONS UNDER 40 CFR 268. IT MUST BE DISPOSED OF IN
ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS IN A
PERMITTED HAZARDOUS WASTE TREATMENT FACILITY.

===== MSDS Transport Information =====

Transport Information:LAND (U.S. DOT): CALCIUM HYPOCHLORITE, HYDRATED
MIXTURES, 5.1, UN 2880, PGII. WATER (IMO): SAME AS ABOVE. AIR
(IATA/ICAO): SAME AS ABOVE. HAZARD LABEL/PLACARD: OXIDIZER.
REPORTABLE QUANTITY: 10 LBS. (PER 49 CFR 172.101, APPENDIX).
EMERGENCY GUIDE NO. 45.

===== Regulatory Information =====

SARA Title III Information:HEALTH: IMMEDIATE (ACUTE); PHYSICAL: FIRE
AND REACTIVITY.

Federal Regulatory Information:TOXIC
SUBSTANCES CONTROL ACT: THIS
PRODUCT IS LISTED IN THE TOXIC SUBSTANCES CONTROL ACT INVENTORY.
NSF LIMITS: NSF MAXIMUM DRINKING WATER USE CONCENTRATION: 46 MG/L
AS CALCIUM HYPOCHLORITE.

State Regulatory Information:

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