Product ID:CPE00251# CHLORINE

MSDS Date:09/04/1997

FSC:6830

NIIN:00-169-0783

MSDS Number: BPHXZ === Responsible Party ===

Company Name: OLIN CORPORATION

Address:501 MERRITT 7

Box:4500

City:NORWALK (FORMALLY IN STAMFORD,CT)

State:CT

ZIP:06856-4500

Country:US

Info Phone Num:203-750-3000/203-750-3543

Emergenc

y Phone Num:800-654-6911/203-356-2000 Preparer's Name:OLIN MSDS CNTRL GROUP

CAGE:99530

=== Contractor Identification ===

Company Name: OLIN CORPORATION

Address:501 MERRITT 7

Box:4500

City:NORWALK

State:CT

ZIP:06856-4500

Country:US

Phone:203-750-3000/800-511-MSDS

CAGE:99530

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

Ingred Name: CHLORINE (SARA 302/313) (CERCLA)

CAS:7782-50-5

RTECS #:FO2100000 Fraction by Wt: 98-100%

Other REC Limits: NONE RECOMMENDED

OSHA PEL:C 1 PPM

ACGI

H TLV:0.5 PPM/1 STEL; 9596 EPA Rpt Qty:10 LBS DOT Rpt Qty:10 LBS ============= Hazards Identification ======================== LD50 LC50 Mixture:ORAL LD50:NOT AVAI-GAS @ROOM TEMPERATURE Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO Health Hazards Acute and Chronic: HARMFUL IF INHAL. CAUSES EYE/SKIN/RESP TRACT BURNS.CAN CAUSE LUNG DMG.ODOR THRESHOLD:APPROX 1.7MG/M3(0.3PPM).IDLH=10PPM.EYE:RED,PAIN,BLUR VISION,TEAR.LIQ C **AUSE** BURNS W/VISION IMPAIR, CORNEAL DMG. SKIN: IR RIT, RED, SWELL, SCAB FORM.LIQ BURNS.PROL CONTACT CAUSES DERMIS DESTRUCTION W/IMPAIR SKIN.INGEST:IRRIT/BURNS GI(AGGRAV MED) Explanation of Carcinogenicity: PER MSDS: NOT KNOWN OR REPORTED TO BE CARC BY ANY REF SOURCE INCLUDING IARC/OSHA/NTP/EPA. Effects of Overexposure: ACUTE: INHAL IRRIT NOSE/MOUTH/THROAT/LUNGS. MAY CAUSE INFLAMM TO RESP TRACT W/PRODUCTION OF LUNG EDEMA-SHORTNESS OF BREQATH, WHEEZ, CHOKE, CHEST PAIN, IMPARI LUNG FUNCTIO N.HI LEVELS CORRO TO RESP TRACT, LUNG DMG. CHRONIC: REP INAHL EXPO MAY CAUSE IMPAIRMENT OF LUNG FUNCITON & PERM LUNG DMG.MAY CONTRIBUTE TO DVLPMET OF BRONCHIT. Medical Cond Aggravated by Exposure: ASTHMA AND RESPIRATORY AND CARDIOVASCULAR DISEASE. HEALTH:TRACT,NAU,VOMIT,DIARR,ABD PAIN, BLEEDING, TISSUE ULCERATION. First Aid:EYE:IMMED FLUSH W/LG AMTS OF H2O @LEAST 15MINS,LIT UPPER/LOWER EYELIDS.CALL DR @ONCE. SKIN:IMMED FLUSH W/H2O @LEAST 15MINS.CALL DR.CLOTH CONTACT PROD SHOULD BE REMOVED IMMED.INGST:IMMED DRINK LG QUANT OF H2O.DONT INDUCE VOMIT.CALL DR **@ONCE.DONT GIVE ANYTHING BY MOUTH IF** UNCONSC/CONVULS.INHAL:NAU,HEAD,DIZZ STOP WORK IMMED,MOVE TO FREDSH AIR TIL SYMPT DISAPPEAR.BREATH DIFF GIVE OXY.CALL DR.(SUPPLEME)

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

Flash Point:NA Autoignition Temp: Autoignition Temp Text: NP Lower Limits:NA **Upper Limits:NA** Ε

- xtinguishing Media:USE EXTINGUISHING MEDIA COMPATIBLE TO SURROUNDING MATERIALS.
- Fire Fighting Procedures:USE WATER TO COOL CNTNR EXPO TO FIRE HOWEVER DIRECT SPRAY BETWEENFIRE/CNTNR.DONT SPRAY DIRECTLY ON CNTNR UNLESS ABSOLUTELY NECESSARY.H2O REACTIVE MATL;DONT(SUP)
- Unusual Fire/Explosion Hazard: OXIDIZER. WATER REACTIVE. CORROSIVE.

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

- Spill Release Procedures:ALL TRANSP ACCIDENT:800-424-9300 CHEMTREC.SUBJ TO RQ W/RES
- PECT TO CL2.REF:40CFR302.4.HAZ CONC IN AIR MAY BE FOUND IN SPILL AREA/IMMED DOWNWIND.DONT PUT H2O ON PROD-GAS EVOLU INCR.EXPLO HAZ IF CONTACT W/INCOPAT MATL.REMOVE ALL IGN SOURCES.(DISPO)
- Neutralizing Agent:MATL MAY BE NEUTRALIZED FOR DISPO;YOUR REQUESTED TO CALL OCEAN 800-OLIN-911.

Handling and Storage Precautions: DONT TAKE INTERNALLY. AVOID CONTACT W/SKIN/EYE/CLOTHING. UPON CONTACT W/SKIN/EYES WASH OFF W/W ATER. DONT

BREATHE GAS/VAP.STORE IN COOL DRY WELL VENTI PLC

Other Precautions:DONT STORE @TEMPS ABOVE 59C/140F.SHELF LIFE LIMITATIONS:INDEF.TITNAIUM WILL RX VIGOROUSLY RESULTING IN SPONT IGN WHEN CONTACT BY DRY CHLORINE.COMBUST WILL BE SUPPORTED IN CARBON STEEL SYS/EQPMT W/CHLR INE ENVIRO @TEMPS >340F.PROPERLY(SUPPLE)

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

- Respiratory Protection:IF AIR CONCENTRATIONS ABOVE TLV POSSIBLE WEAR NIOSH/MSHA APPROVE
- D RESPIRATOR.WEAR NIOSH/MSHA APPROVED FULL-FACE RESPIRATOR EQUIPPED W/CHEM CARTRIDGES FOR CHLORINE GAS.
- Ventilation: USE LOCAL EXHAUST VENTILATION TO MAINTAIN LEVELS TO BELOW TLV.
- Protective Gloves:WEAR GLOVES-NEOPRENE, BUTYL RUBBER
- Eye Protection: FACE SHIELD W/SAF GLASSES.
- Other Protective Equipment:WEAR BOOTS,APRON-NEOPRENE.FULL IMPERM SUIT RECOMMENDED IF EXPO POSSIBLE TO LG PORTION OF BODY.EMER EYEWASH,SAF SHOWER
- Work Hygienic Practices: LAUNDER CONTAM CLOTH BEF REUSE. PROTECTION

CONCERNS MUST ADDRESS POT OF PHYS CHARACT OF PROD-COMPRESSED GAS, CORR, POISON.

Supplemental Safety and Health

FIRE/EXPLO:SPRAY W/H2O.CONTACT W/RX METLAS(AL)MAY RESULT IN GENERATION OF FLAMM H2 GAS. INCOMPAT:TITANIUM,ZN,TIN.ALKALIES,RED AGENTS,ORG MATLS. OTHER PRECAUT:PURGE SYSTEMS/EPQMT PRIOR TO CONDUCTING HO T WORK. 1STAID:INHAL VAP UNCONSC,MOVE IMMED TO FRESH AIR,CALL DR IMMED.STOP BREATH-ART RESP.ADE VENTI/RESP BEF WORKING.

======================================
HCC:G7
Boiling Pt:B.P. Text:-29F,-34C
Melt/Freeze Pt:M.P/F.P Text:149F,65C Decomp Temp:Decomp Text:NONE
Vapor Pres:114PSI
Vapor Density:2.5
Spec Gravity:NA
pH:NA
Viscosity:NP Evaporation Pote & amp: Poteropos:HEAT OF VAR 122 67PTU/LP
Evaporation Rate & Description Reference: HEAT OF VAP 123.67BTU/LB Solubility in Water: MISCIBLE
Appearance and Odor:GREENISH LIQUID OR GAS, PRODUCT IS COMPRESSED GAS, ACRID ODOR
Percent Volatiles by Volume:100
Corrosion Rate:NP
========= Stability and Reactivity Data =========
Stabili
ty Indicator/Materials to Avoid:YES
NOTICE-SHOULDNT BE REPKG EXCEPT BY QUALIFIED/TRAIN PERSONNEL.ALKALIS,REDUCING AGENTS,ORG MATLS.RXS VIGOROUSLY W/(SUPPLE)
Stability Condition to Avoid:NONE SPECIFIED BY MANUFACTURER.
Hazardous Decomposition Products:HYDROCHLORIC ACID, HYPOCHLOROUS ACID

Waste Disposal Methods:SPILL:SURPRES VAP W/H2OFOG.CONTAIN FOG-NEU/TREAT.CL2 SINK IN H2O,BUBBLE TO FORM HYPOCHLOROUS ACID-SELF

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

DECOMPO.DIVERT TO HOLD AREA-TREAT/NEU.LAND-DIKE,COVER W/FOAM.NEU.WEAR PPE. WASTE-EPA D003,D001.SU BJ TO 40CFR268.CNTRL EVAPO WARRANT.TPQ:100LBS.SARA

Disclaimer (provided with this information by the compiling agencies): This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this

document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.