

STARTEX CHEMICAL, INC.
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CONROE, TEXAS 77305
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3121 Muriatic Acid
#403-428

MATERIAL SAFETY DATA SHEET

24 Hour Emergency Telephone Number - CHEMTREC 1-800-424-9300
THIS MSDS COMPLIES WITH 29 CFR 1910.1200
(THE HAZARD COMMUNICATION STANDARD)

-----SECTION I - PRODUCT IDENTIFICATION-----

PRODUCT NAME: HYDROCHLORIC ACID SOLUTION 20° DEG BAUME (31.5%) *Muriatic Acid*
GENERIC ID: HYDROGEN CHLORIDE
DOT HAZARD CLASSIFICATION: CORROSIVE
DATE PREPARED: 6/21/95

-----SECTION II - COMPONENTS-----

CAS #	CHEMICAL NAME	
7647-01-0	HYDROCHLORIC ACID	20 DEG BE - 31.5%

DOT HAZARDOUS CLASS: CORROSIVE MATERIAL

DOT PLACARD REQUIRED: CORROSIVE, UN 1789

DOT LABEL: CORROSIVE

REPORTABLE QUANTITY - 5,000 LBS. \ 2270 KGS.

NFPA/HMIS RATINGS: HEALTH - 3; FLAMMABILITY - 0; REACTIVITY - 0

SARA TITLE III REPORTING SECTIONS 302, 311, & 313-

313 REPORTING REQUIREMENTS INCLUDE THE RELEASES OF LISTED TOXIC CHEMICALS FOR FACILITIES STANDARD INDUSTRIAL CODES 20-39, WHO MANUFACTURE, IMPORT, PROCESS OR OTHERWISE USE A TOXIC CHEMICAL OR MIXTURE CONTAINING THE TOXIC CHEMICAL ABOVE THE REPORTING THRESHOLD, THRESHOLDS ARE 50,000 LBS./YR. FOR 1988 - 25,000 LBS./YR. FOR 1989 AND THEREAFTER FOR TOXIC CHEMICALS THAT ARE MANUFACTURED, IMPORTED, OR PROCESSED. THE THRESHOLD LIMIT IS 10,000 LBS./YR. FOR TOXIC CHEMICALS THAT ARE OTHERWISE USED.

-----SECTION III - PHYSICAL DATA-----

APPEARANCE:
CLEAR COLORLESS TO YELLOWISH FUMING LIQUID.

ODOR:
PUNGENT & IRRITATING

SOLUBILITY:
COMPLETE

BOILING POINT:
53 DEG. C (127 DEG. F); AZEOTROPE (20.2%) BOILS AT 109 DEG. C (228 DEG. F)

SPECIFIC GRAVITY:
1.16/1.1789 @ 15.5/15.5 DEG. C - 20 & 22 DEG. BE, RESPECTIVELY.

VAPOR DENSITY:
SIMILAR TO WATER

VAPOR PRESSURE:
24/100 MM HG; 20 & 22 DEG. BE, RESPECTIVELY.

EVAPORATION RATE:
NOT APPLICABLE

-----SECTION IV - FIRE AND EXPLOSION INFORMATION-----

FIRE:
NOT FLAMMABLE (HOWEVER CONTACT WITH MOST METALS & MAY PRODUCE HYDROGEN GAS TO POTENTIAL EXPLOSIVE LIMITS)

EXPLOSION:
SEE "FIRE"

FIRE EXTINGUISHING MEDIA:
USE ANY MEANS SUITABLE FOR EXTINGUISHING SURROUNDING FIRE.

-----SECTION V - HEALTH AND HAZARD DATA-----

A. EXPOSURE/HEALTH EFFECTS

INHALATION:
INHALATION CAUSES SEVERE IRRITATION OF UPPER RESPIRATORY TRACT.

INGESTION:
CORROSIVE! INGESTION OF HYDROCHLORIC ACID CAN CAUSE BURNS OF THE MOUTH, THROAT, ESOPHAGUS AND GASTROINTESTINAL TRACT.

SKIN CONTACT:
CORROSIVE! CAN CAUSE REDNESS, PAIN, AND SKIN BURNS. CAN CAUSE CHEMICAL BURNS AND TISSUE DESTRUCTION. IMMEDIATELY FLUSH WITH WATER.

EYE CONTACT:
CONTINUOUSLY FLUSH EYES WITH LARGE AMOUNTS OF WATER FOR AT LEAST TWENTY MINUTES. IRRITATION CONTINUES AFTER FLUSHING, SEEK MEDICAL ATTENTION.

CHRONIC EXPOSURE:
MAY CAUSE DERMITITIS AFTER REPEATED ACUTE EXPOSURES.

AGGRAVATION OF PRE-EXISTING CONDITIONS:
NONE KNOWN

TOXICITY DATA: (RTECS 1983-4 SUPPLEMENT TO 81-82),
INHALATION LC50 - 3124 PPM 1 HR (RAT)
ORAL LD50 - 900 MG/KG (RABBIT)

CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN:
NTP-NO; IARC - NO; OSHA - NO; ACGIH - NO

B. EMERGENCY/FIRST AID

INHALATION:
REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. CALL PHYSICIAN.

INGESTION:
DO NOT INDUCE VOMITING! GIVE LARGE QUANTITIES OF WATER OR MILK OF MAGNESIA. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET IMMEDIATE MEDICAL ATTENTION.

EYE EXPOSURE:
FLUSH EYES WITH PLENTY OF WATER FOR AT 20 MINUTES.
SEEK MEDICAL ATTENTION.

-----SECTION VI-REACTIVITY DATA-----

STABILITY:
STABLE UNDER ORDINARY CONDITIONS OF USE AND STORAGE.

HAZARDOUS DECOMPOSITION PRODUCTS:
HYDROGEN GAS WILL BE FORMED IF ACID CONTACTS METAL.

HAZARDOUS POLYMERIZATION:
THIS SUBSTANCE DOES NOT POLYMERIZE.

INCOMPATIBILITIES (MATERIALS TO AVOID):
RAPIDLY CORRODES MOST METALS. AVOID CONTACT WITH ALUMINUM AND ALUMINUM ALLOYS, CARBON STEEL, COPPER AND COPPER ALLOYS, AND NYLON.

-----SECTION VII-SPILL OR LEAK PROCEDURES-----

RELEASES/SPILLS AND DISPOSAL:
CONTAIN, NEUTRALIZE AND THEN DISPOSE OF AT AN APPROVED HAZARDOUS MATERIALS DISPOSAL SITE
PURSUANT TO LOCAL, STATE AND FEDERAL REGULATIONS.

-----SECTION VIII-PROTECTIVE EQUIPMENT TO BE USED-----

OSHA PERMISSABLE EXPOSURE LIMIT:
5 PPM CL

ACGIH THRESHOLD LIMIT VALUE (TLV)
7 MG/M3 AS HCL

VENTILATION SYSTEM:
LOCAL EXHAUST - TO MEET THE TLV REQUIREMENTS.

PERSONAL RESPIRATORS: (NIOSH APPROVED)
WORKING IN OR ABOUT AN AREA OF POTENTIAL EXPOSURE, IF THE MATERIAL IS FUMING AND EXCEEDS THE
TLV

SKIN PROTECTION:
WEAR IMPERVIOUS PROTECTIVE CLOTHING; INCLUDING BOOTS; GLOVES; LAB COAT; APRON OR COVERALL
TO PREVENT SKIN CONTACT.

EYE PROTECTION:
USE CHEMICAL SAFETY GOGGLES IMPERVIOUS TO PRODUCT. CONTACT LENSES SHOULD NOT BE WORN WHEN
WORKING WITH THIS MATERIAL. MAINTAIN EYE WASH FOUNTAIN AND QUICK-DRENCH FACILITIES IN WORK
AREA.

-----SECTION IX-SPECIAL PRECAUTIONS OR OTHER COMMENTS-----

CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED. SINCE EMPTIED CONTAINERS RETAIN
PRODUCT RESIDUES (VAPOR, LIQUID, AND/OR SOLID), ALL HAZARD PRECAUTIONS GIVEN IN THE DATA
SHEET MUST BE OBSERVED.

STORE AND HANDLE ONLY IN CONTAINERS SUITABLY LINED WITH OR CONSTRUCTED OF MATERIALS SPECIFIC
FOR THIS PRODUCT (CONSULT YOUR SUPPLIER) PROTECT AGAINST PHYSICAL DAMAGE. KEEP SEPARATE FROM
INCOMPATIBLES.

-----DISCLAIMER-----

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