



chemists helping chemists in research & industry

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DATE: 10/08/92
CUST#: 938609
PO#: 72761

M A T E R I A L S A F E T Y D A T A S H E E T

PAGE 1

IDENTIFICATION

PRODUCT #: 25814-8
CAS #: 7647-01-0
MF: HCL

NAME: HYDROCHLORIC ACID, 37%, A.C.S. REAGENT

SYNONYMS

ACIDE CHLORHYDRIQUE (FRENCH) * ACIDO CLORIDRICO (ITALIAN) *
CHLOORWATERSTOF (DUTCH) * CHLOROHYDRIC ACID * CHLOROWODOR (POLISH) *
CHLORWASSERSTOFF (GERMAN) * HYDROCHLORIC ACID (UN1789) (DOT) *
HYDROCHLORIC ACID, ANHYDROUS (UN1050) (DOT) * HYDROCHLORIC ACID
MIXTURE (NA1789) (DOT) * HYDROCHLORIC ACID SOLUTION, INHIBITED
(UN1789) (DOT) * HYDROCHLORIDE * HYDROGEN CHLORIDE (ACGIH, OSHA) *
HYDROGEN CHLORIDE (UN1050) (DOT) * HYDROGEN CHLORIDE, ANHYDROUS
(UN1050) (DOT) * HYDROGEN CHLORIDE, REFRIGERATED LIQUID (UN2186) (DOT)
* MURIATIC ACID * MURIATIC ACID (UN1789) (DOT) * NA 1789 (DOT) *
SPIRITS OF SALT * UN 1050 (DOT) * UN 1789 (DOT) * UN 2186 (DOT) *

TOXICITY HAZARDS

RETECS NO: MW4025000
HYDROCHLORIC ACID

IRRITATION DATA

EYE-RBT 5 MG/30S RINSE MLD

TXCYAC 23,281,82

TOXICITY DATA

IHL-HMN LCLO:1300 PPM/30M

29ZWAE -,207,68

IHL-HMN LCLO:3000 PPM/5M

TABIA2 3,231,33

UNR-MAN LDLO:81 MG/KG

85DCAI 2,73,70

IHL-RAT LC50:3124 PPM/1H

AMRL** TR-74-78,74

IHL-MUS LC50:1108 PPM/1H

JCTODH 3,61,76

IPR-MUS LD50:1449 MG/KG

COREAF 256,1043,63

ORL-RBT LD50:900 MG/KG

BIZEA2 134,437,23

REVIEWS, STANDARDS, AND REGULATIONS

ACGIH TLV-CL 5 PPM 85INA8 5,313,86

EPA FIFRA 1988 PESTICIDE SUBJECT TO REGISTRATION OR RE-REGISTRATION

FEREAC 54,4388,89

MSHA STANDARD: AIR-CL 5 PPM (7 MG/M3) DTLVS* 3,129,71

OSHA PEL: CL 5 PPM (7 MG/M3) FEREAC 54,2923,89

OSHA PEL FINAL: CL 5 PPM (7 MG/M3) FEREAC 54,2923,89

NIOSH REL TO HYDROGEN CHLORIDE-AIR: CL 5 PPM NIOSH* DHHS #92-100,92

NOHS 1974: HZD 38580; NIS 360; TNF 87434; NOS 156; TNE 824985

NOES 1983: HZD 38580; NIS 321; TNF 60309; NOS 183; TNE 1238572; TFE
388130

EPA GENETOX PROGRAM 1988, NEGATIVE: CELL TRANSFORM.-SA7/SHE

EPA TSCA CHEMICAL INVENTORY, JUNE 1990

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TOXICITY HAZARDS

EPA TSCA SECTION 8(E) STATUS REPORT 8EHQ-0578-0146
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, JULY 1992
NIOSH ANALYTICAL METHODS: SEE ACIDS, INORGANIC, 7903

TARGET ORGAN DATA

SENSE ORGANS AND SPECIAL SENSES (OTHER EYE EFFECTS)
LUNGS, THORAX OR RESPIRATION (RESPIRATORY STIMULATION)
SKIN AND APPENDAGES (AFTER SYSTEMIC EXPOSURE: DERMATITIS, OTHER)

ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS)
DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR COMPLETE INFORMATION.

HEALTH HAZARD DATA

ACUTE EFFECTS

MAY BE FATAL IF INHALED, SWALLOWED, OR ABSORBED THROUGH SKIN.
CAUSES BURNS.

MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES
AND UPPER RESPIRATORY TRACT, EYES AND SKIN.

INHALATION MAY BE FATAL AS A RESULT OF SPASM, INFLAMMATION AND EDEMA
OF THE LARYNX AND BRONCHI, CHEMICAL PNEUMONITIS AND PULMONARY EDEMA.
SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING,
WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND
VOMITING.

FIRST AID

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES OR SKIN WITH COPIOUS
AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED
CLOTHING AND SHOES.

ASSURE ADEQUATE FLUSHING OF THE EYES BY SEPARATING THE EYELIDS
WITH FINGERS.

IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL
RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.

IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS.

CALL A PHYSICIAN IMMEDIATELY.

WASH CONTAMINATED CLOTHING BEFORE REUSE.

DISCARD CONTAMINATED SHOES.

PHYSICAL DATA

SPECIFIC GRAVITY: 1.200

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PHYSICAL DATA

VAPOR DENSITY: 1.3
VAPOR PRESSURE: 3.23 PSI @ 21.1 C
7.93 PSI @ 37.7 C

APPEARANCE AND ODOR
COLORLESS LIQUID

FIRE AND EXPLOSION HAZARD DATA

FLASHPOINT: NONE
EXTINGUISHING MEDIA
NONCOMBUSTIBLE.
USE EXTINGUISHING MEDIA APPROPRIATE TO SURROUNDING FIRE CONDITIONS.
SPECIAL FIREFIGHTING PROCEDURES
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO
PREVENT CONTACT WITH SKIN AND EYES.
USE WATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS.
UNUSUAL FIRE AND EXPLOSION HAZARDS
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

REACTIVITY DATA

INCOMPATIBILITIES

BASES
AMINES
ALKALI METALS
COPPER, COPPER ALLOYS
ALUMINUM
CORRODES STEEL
DO NOT ALLOW WATER TO ENTER CONTAINER BECAUSE OF VIOLENT REACTION.
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
TOXIC FUMES OF:
HYDROGEN CHLORIDE GAS

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED
EVACUATE AREA.
WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY
RUBBER GLOVES.

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SPILL OR LEAK PROCEDURES

COVER WITH DRY-LIME, SAND, OR SODA ASH. PLACE IN COVERED CONTAINERS USING NON-SPARKING TOOLS AND TRANSPORT OUTDOORS. VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

WASTE DISPOSAL METHOD

FOR SMALL QUANTITIES: CAUTIOUSLY ADD TO A LARGE STIRRED EXCESS OF WATER. ADJUST THE PH TO NEUTRAL, SEPARATE ANY INSOLUBLE SOLIDS OR LIQUIDS AND PACKAGE THEM FOR HAZARDOUS-WASTE DISPOSAL. FLUSH THE AQUEOUS SOLUTION DOWN THE DRAIN WITH PLENTY OF WATER. THE HYDROLYSIS AND NEUTRALIZATION REACTIONS MAY GENERATE HEAT AND FUMES WHICH CAN BE CONTROLLED BY THE RATE OF ADDITION.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

CHEMICAL SAFETY GOGGLES.
SAFETY SHOWER AND EYE BATH.
FACESHIELD (8-INCH MINIMUM).
NIOSH/MSHA-APPROVED RESPIRATOR IN NONVENTILATED AREAS AND/OR FOR EXPOSURE ABOVE THE ACGIH TLV.
MECHANICAL EXHAUST REQUIRED.

RUBBER GLOVES.
DO NOT PIPET BY MOUTH.
AVOID BREATHING VAPOR.
DO NOT GET IN EYES, ON SKIN, ON CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
WASH THOROUGHLY AFTER HANDLING.

CORROSIVE.
POISON
KEEP TIGHTLY CLOSED.
MAY DEVELOP PRESSURE.
REACTS VIOLENTLY WITH WATER.
STORE IN A COOL DRY PLACE.

LABEL PRECAUTIONARY STATEMENTS

CORROSIVE
CAUSES BURNS.
REACTS VIOLENTLY WITH WATER.
POISON

MAY DEVELOP PRESSURE.
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.

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PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING.
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE
PROTECTION.
DO NOT BREATHE VAPOR.

REGULATORY INFORMATION

37.0% HYDROCHLORIC ACID 7647-01-0

THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.

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