

MALLINCKRODT INC SCIENCE PRODUCTS DIVISION -- HYDROCHLORIC ACID,37% --  
6810-00-753-4786

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

Product ID:HYDROCHLORIC ACID,37%

MSDS Date:12/08/1995

FSC:6810

NIIN:00-753-4786

MSDS Number: CDMMR

=== Responsible Party ===

Company Name:MALLINCKRODT INC SCIENCE PRODUCTS DIVISION

Address:PARIS BYPASS

Box:M

City:PARIS

State:KY

ZIP:40361

Country:US

Info Phone Num:314-982-5000

Emergency Phone Num:314-982-5000

CAGE:62910

=== Contractor Identification ===

Company Name:MALLINCKRODT SPECIALTY CHEMICALS CO

Address:222 RED SCHOOL LANE

Box:City:PHILLIPSBURG

State:NJ

ZIP:08865

Country:US

Phone:908-859-2151

CAGE:62910

Company Name:SCIENCE KIT INC

Address:777 E PARK DR

Box:City:TONAWANDA

State:NY

ZIP:14150-6708

Country:US

Phone:716-874-6020

CAGE:57020

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

Ingred Name:HYDROGEN CHLORIDE (HYDROCHLORIC ACID) (SARA

302/313)  
(CERCLA)  
CAS:7647-01-0  
RTECS #:MW4025000  
Fraction by Wt: 37%  
Other REC Limits:NONE SPECIFIED  
OSHA PEL:C 5 PPM  
ACGIH TLV:C 5 PPM; 9596  
EPA Rpt Qty:5000 LBS  
DOT Rpt Qty:5000 LBS

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

LD50 LC50 Mixture:LD50 (ORAL RABBIT) IS 900 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-EYES:SEVERE IRRITATION,PAINFUL  
BURNS.  
SKIN:SEVERE BURNS. INHALATION:ULCERATION OF  
NOSE,THROAT,LARYNX. INGESTION: SEVERE BURNS OF MUCOUS MEMBRANE OF  
MOUTH,ESOPHAGUS,STOMACH. CHRONIC-EYES: PERMANENT VISUAL  
IMPAIRMENT,TOTAL LOSS OF SIGHT. SKIN:DERMATITIS. INHALATION:EROSION  
OF TEETH.EDEMA OF LUNGS.  
Explanation of Carcinogenicity:NONE OF THE COMPOUNDS IN THIS PRODUCT IS  
LISTED BY IARC, NTP, OR OSHA AS A CARCINOGEN.  
Effects of Overexposure:EYES:PAINFUL BURNS. SKIN:SEVERE BURNS.  
INHALATION:COUGHING,BURNING OF THROAT,CHOKING SENSATION.  
INGESTION:LIPS AND MOUTH USUALLY TURN WHITE,AND LATER BROWN.PAIN IN  
THE THROAT AND STOMACH, DIFFICULTY IN SWALLOWING,INTENSE  
THIRST,NAUSEA AND VOMITING,FOLLOWED BY DIARRHEA,IN SEVERE CASES BY  
COLLAPSE AND UNCONSCIOUSNESS.  
Medical Cond Aggravated by Exposure:PERSONS WITH PRE-EXISTING DISEASE  
INVOLVING SKIN, OR RESPIRATORY TRACT MAY BE AT INCREASED RISK FROM  
EXPOSURE.

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

First Aid:INHALATION:REMOVE TO FRESH AIR. RESUSCITATE IF NOT BREATHING.  
GET MEDICAL ATTENTION. EYES:IMMEDIATELY FLUSH WITH PLENTY OF WATER  
FOR 15 MINUTES.GET MEDICAL ATTENTION. SKIN:REMOVE CONTAMINATED  
CLOTHING .WASH WITH SOAP AND WATER.IF IRRITATIONPERSISTS,SEE  
DOCTOR. INGESTION:DO NOT INDUCE VOMITING.GIVE LARGE QUANTITIES OF  
WATER OR MILK.GET IMMEDIATE MEDICAL ATTENTION.NOTHING BY MOUTH IF  
UNCONSCIOUS.

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

Flash Po

int:NONE

Lower Limits:NOT GIVEN

Upper Limits:NOT GIVEN

Extinguishing Media:USE WATER SPRAY.

Fire Fighting Procedures:WEAR FIRE FIGHTING PROTECTIVE EQUIPMENT AND A FULL FACED SELF CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER SPRAY. CONTAIN RUNOFF.

Unusual Fire/Explosion Hazard:CAN REACT WITH METAL TO RELEASE FLAMMABLE AND EXPLOSIVE HYDROGEN GAS. CONTAINERS MAY BURST ON HEAT OF FIRE.

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

Spill R

Release Procedures:WEAR SCBA AND PROTECTIVE CLOTHING.NEUTRALIZE WITH LIME,SODA ASH OR LIMESTONE SOLUTIONS.NEUTRALIZATION WILL EVOLVE CARBON DIOXIDE.IN ENCLOSED SPACES,PROVIDE AMPLE VENTILATION.ABSORB IN INERT MATERIAL,AND PLACE IN APPROPRIATE DISPOSAL CONTAINER.

Neutralizing Agent:LIME(CALCIUM HYDROXIDE),SODA ASH(SODIUM CARBONATE), LIMESTONE(CALCIUM CARBONATE)

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

Handling and Storage Precautions:STORE IN A COOL , DRY, WELL VENTILATED

AREA. KEEP CONTAINERS TIGHTLY CLOSED WHEN NOT IN USE. PROTECT FROM PHYSICAL DAMAGE AND DIRECT SUNLIGHT.

Other Precautions:DO NOT TAKE INTERNALLY. DO NOT BREATHE MIST. AVOID PROLONGED OR REPEATED BREATHING OF VAPOR. AVOID CONTACT WITH EYES. USE WITH ADEQUATE VENTILATION. WASH THOROUGHLY AFTER HANDLING. FOR INDUSTRIAL USE ONLY.

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

Respiratory Protection:POWERED AIR-PURIFYING RESPIRATOR WITH AN ACID

GAS CARTRIDGE OR SELF-CONTAINED BREATHING APPARATUS AS REQUIRED FOR THE EXPOSURE OF CONCERN.

Ventilation:GENERAL (MECHANICAL) AND/OR LOCAL EXHAUST VENTILATION. LOCAL EXHAUST IS PREFERRED.

Protective Gloves:RUBBER, NEOPRENE.

Eye Protection:CHEMICAL GOGGLES AND/OR FULL FACE SHIELD

Other Protective Equipment:IMPERVIOUS CLOTHING,FOOTWEAR AND HEAD GEAR. EYE WASH STATION AND SAFETY SHOWER.

Work Hygienic Practices:OBSERVE GOOD PERSONAL HYGIENE PRACTICES AND RECOMMENDED PR

PROCEDURES. DO NOT WEAR CONTAMINATED CLOTHING OR  
FOOTWEAR.

Supplemental Safety and Health

AVOID PROLONGED OR REPEATED EXPOSURE. DO NOT GET ON SKIN OR IN EYES. DO  
NOT BREATHE VAPORS OR MISTS.

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

HCC:C1

Boiling Pt:B.P. Text:127F,53C

Melt/Freeze Pt:M.P/F.P Text:-101F,-74C

Vapor Pres:190

Vapor Density:NOT GIVEN

Spec Gravity:1.18

Evaporation Rate & Reference:NOT GIVEN

Solubility in Water:INFINITE IN WATER

Appearance and Odo

r:CLEAR, COLORLESS, FUMING LIQUID.

Percent Volatiles by Volume:100 %

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

Stability Indicator/Materials to Avoid:YES

STRONG BASES, METALS, METAL OXIDES, HYDROXIDES, AMINES, CARBONATES,  
CYANIDES, SULFIDES, SULFITES, FORMALDEHYDE.

Stability Condition to Avoid:HIGH HEAT, OPEN FLAMES.

Hazardous Decomposition Products:HYDROGEN CHLORIDE FUMES WHEN HEATED.  
WILL REACT WITH WATER TO PRODUCE HEAT AND TOXIC AND CORROSIVE  
FUMES.

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

Waste Disposal Methods:NOTIFY YOUR LOCAL ENVIRONMENTAL OFFICER.DISPOSAL  
SHOULD BE MADE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND  
LOCAL LAWS AND REGULATIONS.

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