

MALLINCKRODT BAKER, INC. -- HYDROCHLORIC ACID, 33-40%, 9535 -- 6810-00-237-2955

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Product Identification
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Product ID:HYDROCHLORIC ACID, 33-40%, 9535

MSDS Date:12/08/1996

FSC:6810

NIIN:00-237-2955

Status Code:A

MSDS Number: CKJMJ

=== Responsible Party ===

Company Name:MALLINCKRODT BAKER, INC.

Address:222 RED SCHOOL LANE

City:PHILLIPSBURG

State:NJ

ZIP:08865

Country:US

Info Phone Num:800-58

2-2537

Emergency Phone Num:908-859-2151

Resp. Party Other MSDS Num.:H3880

Preparer's Name:STRATEGIC SERVICES DIV.

Chemtec Ind/Phone:(800)424-9300

CAGE:70829

=== Contractor Identification ===

Company Name:MALLINCKRODT BAKER, INC.

Address:222 RED SCHOOL LANE

Box:City:PHILLIPSBURG

State:NJ

ZIP:08865

Country:US

Phone:800-582-2537

CAGE:70829

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Composition/Information on Ingredients
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Ingred Name:HYDROGEN CHLORIDE (HYDROCHLORIC ACID) (SARA III)

CAS:7647-01-0

RTECS #:MW402

5000
Minimum % Wt:33.
Maximum % Wt:40.
Other REC Limits:NONE SPECIFIED
OSHA PEL:C 5 PPM
ACGIH TLV:C 5 PPM; 9192
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS

Ingredient Name:WATER
CAS:7732-18-5
RTECS #:ZC0110000
Minimum % Wt:60.
Maximum % Wt:67.
Other REC Limits:NONE SPECIFIED

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

LD50 LC50 Mixture:ORAL LD50 (RABBIT): 900 MG/KG(ACID CONC)

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: CORROSIVE! VAPORS ARE IRRITATING AND MAY CAUSE EYE DAMAGE. CONTACT MAY CAUSE SEVERE BURNS AND PERMANENT DAMAGE. SKIN: CORROSIVE! CAN CAUSE REDNESS, PAIN, SEVERE SKIN BURNS. CONCENTRATED SOLUTIONS CAUSE DEEP ULCERS AND DISCOLORSKIN. INHALATION: CORROSIVE! VAPORS CAN CAUSE COUGHING, CHOKING, INFLAMMATION OF NOSE, THROAT, UPPER RESPIRATORY TRACT, IN SEVERE CASES, PULMONARY EDEMA, CIRCULATORY FAILURE, DEATH.

INGESTION: CORROSIVE! CAN CAUSE PAIN AND BURNS OF MOUTH, THROAT, ESOPHAGUS, GI TRACT. MAY CAUSE NAUSEA, VOMITING, DIARRHEA. MAY BE FATAL. CHRONIC: LONG TERM EXPOSURE TO CONCENTRATED VAPORS MAY CAUSE EROSION OF TEETH.

Explanation of Carcinogenicity:THERE ARE NO INGREDIENTS ABOVE 0.1% WHICH ARE IDENTIFIED AS CARCINOGENS BY NTP, IARC OR OSHA.

Effects of Overexposure:EYES: IRRITATION, BURNS, DAMAGE. SKIN: IRRITATION, REDNESS, BURNS, ULCERS, DISCOLORED SKIN. INHALATION: COUGHING,

CHOKING, INFLAMMATION OF NOSE, THROAT, , UPPER RESPIRATORY TRACT, PULMONARY EDEMA, CIRCULATORY FAILURE, DEATH. INGESTION: PAIN AND BURNS OF MOUTH, THROAT, ESOPHAGUS, GASTROINTESTINAL TRACT. NAUSEA, VOMITING, DIARRHEA, DEATH.

Medical Cond Aggravated by Exposure:PERSONS WITH PRE-EXISTING SKIN DISORDERS OR EYE DISEASE MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THIS SUBSTANCE.

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

First Aid:EYES: FLUSH WITH PLEN

TY OF WATER FOR 15 MINUTES, LIFTING

LOWER AND UPPER EYELIDS OCCASIONALLY. GET MEDICAL ATTENTION. SKIN:
FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE
REMOVING CONTAMINATED CLOTHING AND SHOES. WASH CLOTHING BEFORE
REUSE. CLEAN SHOES BEFORE REUSE. GET MEDICAL ATTENTION.

INHALATION: MOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL
RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. GET MEDICAL
ATTENTION. INGESTION: DO NOT INDUCE VOMITING. GIVE LARG

E QUANTITIES

OF WATER OR MILK IF AVAILABLE. NEVER GIVE ANYTHING BY MOUTH TO AN
UNCONSCIOUS PERSON. GET MEDICAL ATTENTION.

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

Flash Point:NONE

Extinguishing Media:IF INVOLVED IN A FIRE, USE SPRAY. NEUTRALIZE WITH
SODA ASH OR SLAKED LIME.

Fire Fighting Procedures:WEAR PROTECTIVE CLOTHING AND NIOSH-APPROVED
SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN
THE PRESSURE DEMAND OR OTHER POSITIVE

PRESSURE MODE. STRUCTURAL

FIREFIGHTER'S PROTECTIVE CLOTHING IS INEFFECTIVE FOR FIRES
INVOLVING HYDROCHLORIC ACID. COOL TANKS WITH WATER SPRAY UNTIL WELL
AFTER FIRE IS OUT.

Unusual Fire/Explosion Hazard:NOT CONSIDERED TO BE AN EXPLOSIVE HAZARD.

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

Spill Release Procedures:VENTILATE AREA. WEAR APPROPRIATE PERSONAL
PROTECTIVE EQUIPMENT. CONTAIN AND RECOVER LIQUID. NEUTRALIZE WITH
SODA ASH, LIME, ABSORB WITH INER

T MATERIAL (VERMICULITE, DRY SAND,

EARTH), AND PLACE IN WASTE CONTAINER. DO NOT USE COMBUSTIBLE
MATERIALS. DO NOT FLUSH TO SEWER! US REGULATIONS (CERCLA), (800)
424-8802, REQUIRE REPORTING SPILLS TO SOIL, WATER, AIR IN EXCESS OF
REPORTABLE QUANTITIES.

Neutralizing Agent:SODA ASH, LIME.

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

Handling and Storage Precautions:STORE IN A COOL, DRY, VENTILATED AREA
WITH ACID RESISTANT FLOORS AND GOOD DRAINAGE. PROTE

CT FROM PHYSICAL

DAMAGE. KEEP OUT OF DIRECT SUNLIGHT AND AWAY FROM HEAT, WATER, AND INCOMPATIBLE MATERIALS. DO NOT WASH OUT CONTAINER AND USE IT FOR OTHER PURPOSES.

Other Precautions:WHEN DILUTING, THE ACID SHOULD ALWAYS BE ADDED SLOWLY TO WATER AND IN SMALL AMOUNTS. NEVER USE HOT WATER AND NEVER ADD WATER TO THE ACID. WATER ADDED TO ACID CAN CAUSE UNCONTROLLED BOILING AND SPLASHING. WHEN OPENING METAL CONTAINERS, USE NON-SPARKING TOOLS BECAUSE OF THE POSSIBILITY OF HYDROGEN GAS BEING PRESENT.

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

Respiratory Protection:IF EXPOSURE LIMIT EXCEEDED, A FULL FACEPIECE RESPIRATOR WITH ACID GAS CARTRIDGE MAY BE WORN UP TO 50 TIMES EXPOSURE LIMIT OR MAXIMUM USE CONCENTRATION SPECIFIED BY REGULATORY AGENCY OR SUPPLIER, WHICH EVER IS LOWEST. FOR EMERGENCIES OR INSTANCES WHERE EXPOSURE LEVELS ARE NOT KNOWN, USE FULL-FACEPIECE POSITIVE-PRESSURE, AIR-SUPPLIED RESPIRATOR.

Ventila

tion:A SYSTEM OF LOCAL AND/OR GENERAL EXHAUST IS RECOMMENDED TO KEEP EXPOSURES BELOW THEAIRBORNE EXPOSURE LIMITS.

Protective Gloves:RUBBER OR NEOPRENE GLOVES RECOMMENDED.

Eye Protection:CHEMICAL SAFETY GOGGLES AND/OR FULL FACE SHIELD WHERE SPLASHING IS POSSIBLE.

Other Protective Equipment:IMPERVIOUS BOOTS, APRON, OR COVERALLS AS NEEDED. PROVIDE A EYE WASH STATION AND A SAFETY SHOWER IN WORK AREA.

Work Hygienic Practices:WASH HANDS.SEPERATE WORK CLOTHES FROM STREET CLOTHES.LAU
NDER WORK CLOTHES BEFORE REUSE.KEEP FOOD OUT OF THE WORK AREA.

Supplemental Safety and Health

WARNING: AIR PURIFYING RESPIRATORS DO NOT PROTECT WORKERS IN OXYGEN-DEFICIENT ATMOSPHERES.

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

HCC:C1

Boiling Pt:=108.9C, 228.F

B.P. Text:20.2%

Melt/Freeze Pt:=-73.7C, -101.F

Vapor Pres:190 @ 25C (77F)

Vapor Density:NOT KNOWN

Spec Gravity:1.18

pH:0.1 @(1.0 N)

Solubility in Water:COMPLETE

Appearance and Odor:COLORLESS, FUMING LIQU

ID WITH PUNGENT ODOR OF
HYDROGEN CHLORIDE..
Percent Volatiles by Volume:100

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

Stability Indicator/Materials to Avoid: YES
STRONG BASES, METALS, METAL OXIDES, HYDROXIDES, AMINES, CARBONATES, AND
OTHER ALKALINE MATERIALS. ALSO INCOMPATIBLE WITH MATERIALS SUCH AS
CYANIDES, SULFIDES, SULFITES, AND FORMALDEHYDE.
Stability Condition to Avoid: STABLE UNDER ORDINARY CONDITIONS OF USE
AND STORAGE. CONTAINERS MAY BURST WHEN
HEATED. HEAT, DIRECT
SUNLIGHT.
Hazardous Decomposition Products: THERMAL DECOMPOSITION PRODUCES TOXIC
CHLORINE FUMES AND EXPLOSIVE HYDROGEN GAS. ALSO TOXIC HYDROGEN
CHLORIDE FUMES AND WILL REACT WITH WATER OR STEAM TO PRODUCE HEAT
AND TOXIC AND CORROSIVE FUMES.
Conditions to Avoid Polymerization: WILL NOT OCCUR.

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

Toxicological Information: INHALATION RAT LC50: 3124 PPM/LH; ORAL RABBIT
LD50: 900 MG/KG (HYDROCHLORIC
ACID CONCENTRATED); INVESTIGATED AS A
TUMORIGEN, MUTAGEN, REPRODUCTIVE EFFECTOR. CANCER LISTS: NOT LISTED
BY NTP OR IARC.

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

Ecological: ENVIRONMENTAL FATE: WHEN RELEASED INTO THE SOIL, THIS
MATERIAL IS NOT EXPECTED TO BIODEGRADE. WHEN RELEASED INTO THE
SOIL, THIS MATERIAL MAY LEACH INTO GROUND WATER. ENVIRONMENTAL
TOXICITY: THIS MATERIAL IS EXPECTED TO BE TOXIC TO AQUATIC LIFE.

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

Waste Disposal Methods: SEND WASTE TO A RCRA APPROVED WASTE FACILITY.
PROCESSING, USE, CONTAMINATION OF THIS PRODUCT MAY CHANGE THE
WASTE MANAGEMENT OPTIONS. STATE AND LOCAL DISPOSAL REGULATIONS MAY
DIFFER FROM FEDERAL DISPOSAL REGULATIONS. DISPOSE OF CONTAINER AND
UNUSED CONTENTS IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL
REQUIREMENTS.

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

Transport Information: DO

MESTIC (LAND, D.O.T.): PROPER SHIPPING NAME:

HYDROCHLORIC ACID, CLASS 8, UN 1789, PKG I I, INFORMATION REPORTED FOR PRODUCT/SIZE: 475 LBS. INTERNATIONAL (WATER, I.M.O.): PROPER SHIPPING NAME: HYDROCHLORIC ACID, CLASS 8, UN 1789, PKG II, INFORMATION REPORTED FOR PRODUCT/SIZE: 475 LBS.

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Regulatory Information
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SARA Title III Information:SECTION 302: HYDROGEN CHLORIDE (CAS# 7647-01-0): RQ=5000; TPQ=500. SECTION 313: HYDROGEN CHLORIDE (CAS#

7647-01-0): LIST YES; CHEMICAL CATG. NO. SARA 311/312: ACUTE: YES; CHRONIC:= YES; FIRE= NO; PRASSURE= NO. REACTIVITY= NO; (MIXTURE/LIQUID):Federal Regulatory Information:HYDROGEN CHLORIDE (CAS# 7647-01-0): CERCLA= 5000; RCRA 261.33= NO; TSCA 8(D)= NO. CHEMICAL WEAPONS CONVENTION: NO. TSCA 12(B)= NO; CDTA= YES.

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Other Information
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