

ALLIED-SIGNAL ENGINEERED MATERIALS SECTOR -- MURIATIC ACID, HYDROCHLORIC ACID - HYD  
MATERIAL SAFETY DATA SHEET  
NSN: 6810002229641  
Manufacturer's CAGE: 1L164  
Part No. Indicator: A  
Part Number/Trade Name: MURIATIC ACID, HYDROCHLORIC ACID

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General Information

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Item Name: HYDROCHLORIC ACID, TECHNICAL  
Company's Name: ALLIED-SIGNAL INC, ENGINEERED MATERIALS SECTOR  
Company's Street: COLUMBIA RD AND PARK AVE  
Company's P. O. Box: 1139R  
Company's City: MORRISTOWN  
Company's State: NJ  
Company's Country: US  
Company's Zip Code: 07962-1139  
Company's Emerg Ph #: 201-455-2000  
Company's Info Ph #: 201-455-4157  
Distributor/Vendor # 1: MAYS CHEMICAL CO., INC (317-842-8722)  
Distributor/Vendor # 1 Cage: 6T060  
Record No. For Safety Entry: 008  
Tot Safety Entries This Stk#: 027  
Status: SE  
Date MSDS Prepared: 01AUG90  
Safety Data Review Date: 14AUG95  
Supply Item Manager: CX  
Preparer's Company: PRODUCT SAFETY DEPT  
MSDS Serial Number: BDKBN  
Specification Number: O-H-765  
Hazard Characteristic Code: C1  
Unit Of Issue: BT  
Unit Of Issue Container Qty: 5 PT  
Type Of Container: BOTTLE  
Net Unit Weight: 6 LBS

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Ingredients/Identity Information

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Proprietary: NO  
Ingredient: HYDROGEN CHLORIDE (HYDROCHLORIC ACID) (SARA III)  
Ingredient Sequence Number: 01  
Percent: 28-35  
NIOSH (RTECS) Number: MW4025000  
CAS Number: 7647-01-0  
OSHA PEL: C 5 PPM  
ACGIH TLV: C 5 PPM; 9394  
Other Recommended Limit: NONE RECOMMENDED

Proprietary: NO  
Ingredient: WATER  
Ingredient Sequence Number: 02  
Percent: BALANCE  
NIOSH (RTECS) Number: ZC0110000  
CAS Number: 7732-18-5  
OSHA PEL: NOT ESTABLISHED  
ACGIH TLV: NOT ESTABLISHED  
Other Recommended Limit: NONE RECOMMENDED

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Physical/Chemical Characteristics

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Appearance And Odor: COLORLESS TO LIGHT YELLOW LIQUID, PUNGENT ODOR.  
Boiling Point: 181F, 83C

Melting Point: 127F, 53C  
 Vapor Pressure (MM Hg/70 F): 25  
 Vapor Density (Air=1): 1.27  
 Specific Gravity: 1.16  
 Evaporation Rate And Ref: >1, ETHER =1.  
 Solubility In Water: COMPLETE.  
 Percent Volatiles By Volume: 28-35  
 pH: SUPPLE  
 Autoignition Temperature: N/A

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Fire and Explosion Hazard Data

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Flash Point: NOT FLAMMABLE  
 Lower Explosive Limit: N/A  
 Upper Explosive Limit: N/A  
 Extinguishing Media: IF INVOLVED IN FIRE USE WATER. NO STD AGENT TO AVOID.  
 Special Fire Fighting Proc: FIREFIGHTERS SHOULD WEAR NIOSH APPROVED SCBA  
 W/FULL FACEPC & FULL PROT CLOTH.COOL FIRE-EXPO CNTNRS W/WATERSPRAY.TAKE  
 PRECAUTIONS SO AS NOT TO SPLASH MATL AROUND  
 Unusual Fire And Expl Hazrds: ACID REACTS W/STEEL & MOST OTHER METALS TO  
 GENERATE HYDROGEN GAS WHICH IS SERIOUS FIRE/EXPLO HAZARD.

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Reactivity Data

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Stability: YES  
 Cond To Avoid (Stability): ELEVATED TEMPERATURES (INCREASE VAPOR PRESSURE  
 OF PRODUCT;MAY RUPTURE CONTAINER).  
 Materials To Avoid: MOST METALS.ALKALIS,METALLIC OXIDES,AMINES,ESTERS,ORG,  
 CARBONATES,CYANIDES,SULFIDES,WATER REACTIVE MATLS.  
 Hazardous Decomp Products: HCL VAP(RELEASED NORMALLY @AMB CONDITIONS)  
 RELEASED IN INCREASING AMTS @HI TEMP.H2 RELEASE ON CONTACT W/SOME METALS.  
 Hazardous Poly Occur: NO  
 Conditions To Avoid (Poly): NOT APPLICABLE

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Health Hazard Data

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LD50-LC50 Mixture: UNKNOWN  
 Route Of Entry - Inhalation: YES  
 Route Of Entry - Skin: YES  
 Route Of Entry - Ingestion: YES  
 Health Haz Acute And Chronic: INHAL:IRRIT/CORR BURNS TO UPPER RESP TRACT,  
 INTESNE LACRIMATION, COUGH, THROAT IRRI, SNEEZ, LABORED BREATH.HI EXPO LUNG  
 IRRIT,PULM EDEMA.CONC .13-.2% LETHAL.INGEST:IRRIT/BURNS TO GI TRACT.  
 PERFORATE STOMACH/ESOPHAGUS.ASPHYXIA FROM EDEMA OF LARYNX.DEHYDRATION  
 PRIMARY HAZ.SKIN:SEVERE BURNS,PAIN,BROWNISH/YELLOW STAINS(OVEREXPO)  
 Carcinogenicity - NTP: NO  
 Carcinogenicity - IARC: NO  
 Carcinogenicity - OSHA: NO  
 Signs/Symptoms Of Overexp: HEALTH HAZ CONT:IRRIT,DERM,BURNS.EYES:IRRIT,  
 CORNEAL BURNS,CONJUCNTIVITS.PERM DAMAGE W/LOSS OF SIGHT. CHRONIC:EXCESSIVE  
 EXPO,REPEATED/RPOLONGED MAY CAUSE EROSION OF TEETH.GASTRITIS & CHRONIC  
 BRONCHITIS AMONG WORKERS EXPO TO HYDROCHLORIC ACID HAVE BEEN REPORTED.  
 Med Cond Aggravated By Exp: NONE SPECIFIED BY MANUFACTURER.  
 Emergency/First Aid Proc: EYES:IMMED FLUSH W/WATER LIFTING EYELIDS.  
 CONTINUE FOR 20-30MINS.DO NOT USE CHEM ANTIDOTES.GET MED HELP.SPEED IS  
 ESSENTIAL. SKIN:IMMED FLUSH W/WATER REMOVING CONTAMIN CLOTH.CONTINUE  
 WASHING FOR @LEAST 15MINS.(DELUGE SHOWERING IS ESSENTIAL IF EXPO TO LIQ  
 ACID IS EXTENSIVE).GET MED EVALUATION.SPEED IS ESSENTIAL. INGEST:CONSC/NO  
 CONVULSIONS GIVE LG AMTS OF WATER IMMED.DO NOT INDUCE VOMIT.GIVE (SUPPLE)

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Precautions for Safe Handling and Use

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Steps If Matl Released/Spill: W/PPE DILUT SM SPILL/LEAK CAUTIOUSLY W/LOTS

OF WATER.NEUTRALIZE RESIDUE.PROVIDE AMPLE VENTI TI ELIMINATE CO2 FORMING.  
 LG:KEEP PEOPLE AWAY.CONTAIN BY DIKING W/SOIL/CLAY.RECOVER ACID IF POSSIBLE.  
 KEEP OUT OF SEWER.RELEASE TO ENVIRO SUBJ TO REPORTING REQ  
 Neutralizing Agent: CHEMICALLY BASIC SUBSTANCES SUCH AS SODA ASH, LIME OR  
 LIMESTONE.  
 Waste Disposal Method: CAUTIOUSLY DILUTE WASTE HCL W/WATER & NEUTRA W/  
 ALKALI.DISPOSE OF IAW APPLICABLE DISPOSAL REGS.USERS SHOULD REVIEW  
 OPERATIONS IN TERMS OF APPLICABLE FED/STATE/LOC LAWS/REGS THEN CONSULT W/  
 REG AGENCY BEF DISPOSAL/DISCHARGE.APPORVED CONTRACTOR.EPA#:D002  
 Precautions-Handling/Storing: DO NOT GET IN EYES/SKIN/CLOTH.AVOID BREATH  
 MIST/VAP.USE ONLY W/ADEQUATE VENTI.KEEP AWAY FRM METALS/INCOMP CHEM.STORE  
 IN DRY WELL VENTI AREA  
 Other Precautions: STORE AWAY FRM HEAT/SUN/OXIDIZING MATL.DIKING OF  
 STORAGE TK RECOMMENDED.ELEV TEMP WILL INCREASE PROD VAP PRESSURE-USE CARE  
 WHEN OPENING CNTNR.PREVENT IGN OF H2 GAS GENERATED BY ACCIDENTAL METAL  
 CONTACT NO SMOKE/ETC IN STORAGE RM/HNDG AREA.

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#### Control Measures

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Respiratory Protection: SPILL/EMERG:NIOSH APPROVED RESP FOR HCL GAS &/OR  
 MIST AS APPLICABLE.SOME EXPO MAY REQUIRE SCBA W/FULL FACEPC OR SUPPLIED-AIR  
 RESP GENERALLY W/FULL FACEPC, HELMET,HOOD.  
 Ventilation: CORR RESIST VENTI SUFFI TO REDUCE ACID MIST/VAP CONC TO TLV.  
 PKG/UNLOAD AREA/OPN PROCESSING EQPMT MECH EXHAU SYS/LOC EXHA  
 Protective Gloves: GAUNTLET GLOVES.  
 Eye Protection: SAF GOGG & FULL FACEPC.NO CONTACT LENSES.  
 Other Protective Equipment: HARD HAT.IF POURING ADD FCSHIELD.ACID RESIST  
 APRON-TROUSERS-JACET, PROT CLOTH,BOOTS.EYEWASH,QUICKSHOWER.NEUTRA SUPP/EQPMT  
 Work Hygienic Practices: WASH WELL AFT HANDLING.WASH CLOTHING BEF REUSE.  
 MED SURVEILLANCE/EDUCATION RECOMMENDED FOR THOSE WORKING W/HCL.  
 Suppl. Safety & Health Data: PH 1% SOLN IS 0.8. 1ST AID:NONGASSING  
 NEUTRALIZER(MILK,MILK OF MAGNESIA,CALCIUM HYDROXIDE).DO NOT GIVE  
 CARBONATES,BICARBONATES,CHALK.GET PROMPT MED ATTN.INHAL:PROMPTLY REMOVE TO  
 FRESH AIR(RESCUERS MAY NEED TO WEAR PPE).STOP BREATH GIVE ART RESP.DIFF  
 BREATH GIVE OXY BY QUAL PERSON.GET PROMPT MED ATTN.

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#### Transportation Data

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Trans Data Review Date: 94229  
 DOT PSN Code: HJG  
 DOT Proper Shipping Name: HYDROCHLORIC ACID, SOLUTION  
 DOT Class: 8  
 DOT ID Number: UN1789  
 DOT Pack Group: II  
 DOT Label: CORROSIVE  
 IMO PSN Code: IEX  
 IMO Proper Shipping Name: HYDROCHLORIC ACID  
 IMO Regulations Page Number: 8183  
 IMO UN Number: 1789  
 IMO UN Class: 8  
 IMO Subsidiary Risk Label: -  
 IATA PSN Code: NPG  
 IATA UN ID Number: 1789  
 IATA Proper Shipping Name: HYDROCHLORIC ACID  
 IATA UN Class: 8  
 IATA Label: CORROSIVE  
 AFI PSN Code: NPG  
 AFI Symbols: T  
 AFI Prop. Shipping Name: HYDROCHLORIC ACID, SOLUTION  
 AFI Class: 8  
 AFI ID Number: UN1789  
 AFI Pack Group: II  
 AFI Special Prov: A3,A6,N41

AFI Basic Pac Ref: 12-5

Additional Trans Data: PER CTFD:SHIPPING NAME:HYDROCHLORIC ACID, SOLUTION,  
UN1789, DOT CLASS:8.

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Disposal Data

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Disposal Data Review Date: 89108

Rec # For This Disp Entry: 01

Tot Disp Entries Per NSN: 011

Landfill Ban Item: YES

Disposal Supplemental Data: COMPOSITION:31.5 MINIMUM BY WEIGHT.SPECIFIC GRAVITY OF 1.16 CORRESPONDS TO 10 DEGREES BAUME (CONVERSION TO HYDROMETER GRADUATIONS). IN CASE OF ACCIDENTAL EXPOSURE OR DISCHARGE, CONSULT HEALTH AND SAFETY FILE FOR PRECAUTIONS.

1st EPA Haz Wst Code New: D002

1st EPA Haz Wst Name New: CORROSIVE

1st EPA Haz Wst Char New: CORROSIVITY

1st EPA Acute Hazard New: NO

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Label Data

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Label Required: YES

Technical Review Date: 17AUG94

Label Status: F

Common Name: MURIATIC ACID, HYDROCHLORIC ACID

Signal Word: DANGER!

Acute Health Hazard-Moderate: X

Contact Hazard-Severe: X

Fire Hazard-None: X

Reactivity Hazard-Slight: X

Special Hazard Precautions: SKIN/UPPER RESP/GI TRACTS IRRIT/BURN.INTESNE LACRIMATION, COUGH, THROAT/LUNG IRRI, SNEEZ, LABORED BREATH.PULM EDEMA.CONC . 13-.2% LETHAL.PERFORATE STOMACH/ESOPH.ASPHYXIA FRM EDEMA OF LARYNX.

DEHYDRATION PRIMARY HAZ.SKIN:PAIN, BRWNH/YELL STAINS, DERM.EYES:IRRIT, CORNEAL BURN, CONJ, PERM DMG W/SIGHT LOSS.1ST AID:EYES:IMMED FLUSH W/WATER OPNG EYELIDS.NO CHEM ANTIDOTES.SKIN:IMMED FLUSH W/WATER REMOVE CONTAMIN CONSC/NO CONVU GIVE LOTS OF WATER IMMED.DO NOT INDUCE VOMIT.GIVE NONGAS NEUTRA (MILK, MILK OF MAGNESIA, CAOH). INHAL:MOVE TO FRESH AIR.ART RESP/OXY AS NECESSARY.IN ALL CASES GET MED ATTN

Protect Eye: Y

Protect Skin: Y

Protect Respiratory: Y

Label Name: ALLIED-SIGNAL INC, ENGINEERED MATERIALS SECTOR

Label Street: COLUMBIA RD AND PARK AVE

Label P.O. Box: 1139R

Label City: MORRISTOWN

Label State: NJ

Label Zip Code: 07962-1139

Label Country: US

Label Emergency Number: 201-455-2000