



Curtin Matheson Scientific, Inc.  
9999 VETERANS MEMORIAL  
DOCK A  
HOUSTON, TX 77038

FISONS

# MATERIAL SAFETY DATA SHEET

MAIL TO: SCHOOLCRAFT COLLEGE  
ATTN: GERI, PURCHASING  
HPS MEMBER  
18600 HAGGERTY RD.

LIVONIA, MI 48152-2696

## SECTION 1 - NAME AND PRODUCT

### MANUFACTURER NAME AND ADDRESS

EM SCIENCE  
A DIV OF EM INDUSTRIES  
P.O. BOX 70  
GIBBSTOWN NJ 08027  
EMERGENCY PHONE 1-800-424-9300

CHEMICAL NUMBER: MHX0622-2

ITEM NUMBER: 0422304

VNDR CATLG NBR:

ENTRY DATE: 02-24-90

CHANGE DATE: 02-24-90

SPECIAL REQUEST

### COMMON NAME (ON LABEL)

HYDROFLUORIC ACID SOLUTION

### CHEMICAL FAMILY

INORGANIC ACID

### TRADE NAME & SYNONYMS

HYDROFLUORIC ACID SOLUTION  
FLUORIC ACID, HYDROGEN FLUORIDE SOLUTION

### CHEMICAL FORMULA

\* FORMULA WEIGHT: 20.01 (ANHYDROUS)

## SECTION 2 - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENT	CAS	% (WT)	TLV	PEL
HYDROFLUORIC ACID SOLUTION	7664-39-3	100.00	.000 SEC.5	.000 SEC.5

PEL: Permissible Exposure Limit established by the Occupational Safety and Health Administration (OSHA).

TLV: Threshold Limit Value established by the American Conference of Governmental Industrial Hygienists, 1986-87.

### OTHER INGREDIENT INFORMATION

NONE OTHER THAN SPECIFIED PRODUCT.

## SECTION 3 - PHYSICAL DATA

BOILING POINT	VOLATILE BY VOLUME (%)	VAPOR PRESSURE
108C	99+	10 20C
MELTING POINT	VAPOR DENSITY	SOLUBILITY IN WATER
N/A	0.7	MISCIBLE
EVAPORATION RATE ( = 1 )	SPECIFIC GRAVITY	
N/A	0.98	
APPEARANCE AND ODOR		
COLORLESS, FUMING LIQUID, PUNGENT ODOR		
OTHER PHYSICAL DATA		
MOLECULAR WEIGHT: 20.01 *		

**SECTION 4 - FIRE AND EXPLOSION DATA****FLASH POINT**

NONCOMBUSTIBLE

**LOWER EXPLOSIVE LIMIT**

N/A

**UPPER EXPLOSIVE LIMIT**

N/A

**EXTINGUISHING MEDIA**

EXTINGUISHING MEDIA..... ANY SUITABLE FOR ADJACENT MATERIAL

**UNUSUAL FIRE AND EXPLOSION HAZARDS**

FIRE &amp; EXPL. HAZARDS.... PRESSURE BUILDUP MAY MAKE CLOSED CONTAINERS EXPLODE.

**SPECIAL FIRE FIGHTING PROCEDURES**

FIRE FIGHTING PROC..... WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING INCLUDING A FULL FACE SHIELD.

**SECTION 5 - HEALTH HAZARD DATA****HEALTH HAZARDS (ACUTE & CHRONIC)**

SEE SIGNS AND SYMPTOMS OF EXPOSURE.

**PRIMARY ROUTES OF EXPOSURE**

ROUTES OF ENTRY..... INHALATION, INGESTION OR SKIN CONTACT.

**SIGNS AND SYMPTOMS OF EXPOSURE**

SYMPTOMS OF EXPOSURE ..... TOXIC BY

INGESTION, INHALATION AND SKIN ABSORPTION. ON CONTACT WITH ANY BODY TISSUE, CAUSES SEVERE BURNS WHICH MAY NOT BE IMMEDIATELY PAINFUL OR VISIBLE WILL PENETRATE SKIN AND ATTACK UNDERLYING TISSUE AND BONE  
INHALATION CAUSES PULMONARY EDEMA, DEATH CONTACT WITH EYE CAN CAUSE IMMEDIATE BLINDNESS.

## SECTION 5 - HEALTH HAZARD DATA (CONTINUED)

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE**  
MEDICAL COND. AGGRAVATED BY EXP. DATA NOT AVAILABLE.

**CARCINOGENICITY**

INDICATORS NOT GIVEN

NTP ☐ Yes ☐ NoIARC ☐ Yes ☐ NoOSHA ☐ Yes ☐ No

CARCINOGENICITY.....: THE  
MATERIAL IS NOT LISTED AS A CANCER CAUSING AGENT.

**EMERGENCY AND FIRST AID PROCEDURES**

EMERGENCY FIRST AID.....: GET

IMMEDIATE MEDICAL ASSISTANCE ESPECIALLY FOR INGESTION EYES: IMMEDIATELY FLUSH  
THOROUGHLY WITH WATER FOR AT LEAST 15 MINUTES INHALATION: REMOVE TO FRESH AIR; GIVE ARTIFICIAL  
RESPIRATION IF BREATHING HAS STOPPED

SKIN: IMMEDIATELY FLUSH THOROUGHLY WITH LARGE AMOUNTS OF WATER; SOAK  
IN OR APPLY COLD SOLUTION OF BENZALKONIUM CHLORIDE OR MAGNESIUM SULFATE UNTIL  
MEDICAL ATTENTION IS OBTAINED INGESTION: DO NOT INDUCE VOMITING; IF CONSCIOUS  
GIVE LARGE QUANTITIES OF WATER, MILK, MILK OF MAGNESIA OR EGGS BEATEN WITH WATER.

**THRESHOLD LIMITS / TOXICITY DATA**

ACGIH TLV/OSHA PEL (TWA).....: (TLV) 3 PPM (CL)

(PEL) 3 PPM; STEL 6 PPM. TOXICITY DATA.....:

-IHL-HMN LCLO: 50 PPM/30M IPR-RAT LDLO: 25

MG/KG IHL-MAN TCLO: 100 MG/CU.M./1M

## SECTION 6 - REACTIVITY DATA

STABILITY Unstable ☐ Stable ☐**CONDITIONS TO AVOID**

CONDITIONS TO AVOID .....: REACTS VIOLENTLY WITH ACETIC ANHYDRIDE,  
ETHANOLAMINE, AMMONIA, CAO, ETHYLENEDIAMINE, ETHYLENEIMINE, PROPIOLACTONE, PROPYLENE  
OXIDE, VINYL ACETATE, SILICATES, P205, AS203.

**INCOMPATIBILITY (MATERIALS TO AVOID)**

MATERIALS TO AVOID.....: ( ) WATER (X) ACIDS (X) BASES ( )  
) CORROSIVES ( ) OXIDIZERS ( ) OTHER..

**SECTION 6 - REACTIVITY DATA (CONTINUED)****HAZARDOUS DECOMPOSITION OR BYPRODUCTS**

HAZARDOUS DECOMPOSITION.: HYDROGEN, FLUORINE

**HAZARDOUS POLYMERIZATION** May Occur ☐ Will Not Occur ☐  
**CONDITIONS TO AVOID**

HAZARDOUS POLYMERIZATION.: DOES NOT OCCUR

**SECTION 7 - SPILL, LEAK, AND DISPOSAL PROCEDURES****STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

SPILL RESPONSE: WEAR

SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING INCLUDING A FULL FACE SHIELD.

CONTAIN IF POSSIBLE, DILUTE WITH AN EXCESS OF

WATER, AND NEUTRALIZE WITH A LIME SLURRY, LIMESTONE, SODA ASH OR OTHER ALKALINE MATERIAL.

TAKE UP AND CONTAINERIZE FOR PROPER DISPOSAL.

**WASTE DISPOSAL METHOD**WASTE DISPOSAL: TO BE PERFORMED IN COMPLIANCE WITH ALL CURRENT LOCAL, STATE AND  
FEDERAL REGULATIONS.**SECTION 8 - SPECIAL PROTECTION INFORMATION****RESPIRATORY PROTECTION**

VENTILATION, RESPIRATORY PROTECTION, PROTECTIVE CLOTHING, EYE PROTECTION: -MATERIAL

MUST BE HANDLED OR TRANSFERRED IN AN APPROVED FUME HOOD OR WITH EQUIVALENT

VENTILATION PROTECTIVE GLOVES (NATURAL RUBBER, NEOPRENE,

NITRILE, OR EQUIVALENT) MUST BE WORN TO PREVENT SKIN CONTACT

PROTECTIVE CLOTHING (NATURAL RUBBER, NEOPRENE, NITRILE, OR EQUIVALENT) MUST BE

WORN WHEN HANDLING THIS MATERIAL SAFETY GLASSES WITH SIDE

SHIELDS MUST BE WORN AT ALL TIMES NIOSH/MSHA-APPROVED RESPIRATOR SHOULD BE WORN IN

THE ABSENCE OF ADEQUATE VENTILATION

**LOCAL VENTILATION**

SEE SECTION 8 - RESPIRATORY PROTECTION

**MECHANICAL VENTILATION**

SEE SECTION 8 - RESPIRATORY PROTECTION

**SPECIAL VENTILATION**

SEE SECTION 8 - RESPIRATORY PROTECTION



**SECTION 8 - SPECIAL PROTECTION INFORMATION (CONTINUED)****OTHER VENTILATION**

SEE SECTION 8 - RESPIRATORY PROTECTION

**PROTECTIVE GLOVES**

SEE SECTION 8 - RESPIRATORY PROTECTION

**EYE PROTECTION**

SEE SECTION 8 - RESPIRATORY PROTECTION

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT**

SEE SECTION 8 - RESPIRATORY PROTECTION.

**SECTION 9 - SPECIAL PRECAUTIONS****PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE**

HANDLING &amp; STORAGE ..... KEEP

CONTAINERS TIGHTLY CLOSED; STORE IN A COOL, WELL-VENTILATED AREA. DO NOT GET IN EYES, ON SKIN OR ON CLOTHING. DO NOT BREATHE VAPOR.

RETAINED RESIDUE MAY MAKE EMPTY CONTAINERS HAZARDOUS; USE CAUTION!.

WORK/HYGIENIC PRACTICES: WASH THOROUGHLY AFTER HANDLING. DO NOT TAKE INTERNALLY. EYE WASH AND SAFETY EQUIPMENT SHOULD BE READILY AVAILABLE.

**SECTION 10 - OTHER INFORMATION****MISCELLANEOUS INFO.**

PREPARATION DATE ..... MAR 29, '89 INFORMATION PHONE

NUMBER : (609) 354-9200

HEALTH ..... 4 FLAMMABILITY .... 0

REACTIVITY : 0 SPECIAL HAZARDS..

DOT SHIPPING NAME: HYDROFLUORIC ACID SOLUTION, DOT

NUMBER..... UN1790 N/A = NOT AVAILABLE..

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