

FISHER SCIENTIFIC CO. CHEMICAL MFG DIV -- HYDROFLUORIC ACID -- 6810-00-237-2920  
===== Product Identification =====

Product ID:HYDROFLUORIC ACID

MSDS Date:10/30/2000

FSC:6810

NIIN:00-237-2920

Status Code:A

MSDS Number: CLMND

=== Responsible Party ===

Company Name:FISHER SCIENTIFIC CO. CHEMICAL MFG DIV

Address:1 REAGENT LANE

City:FAIR LAWN

State:NJ

ZIP:07410-2802

Country:US

Info Phone Num:201-796-7100

Emergency Phone Num:(800)424-9300

Resp. Party Other MSDS Num.:11171

Chemtec Ind/Phone:(800)424-9300

CAGE:1B464

=== Contractor Identification ===

Company Name:FISHER SCIENTIFIC CO. CHEMICAL MFG DIV

Address:1 REAGENT LANE

Box:City:FAIRLAWN

State:NJ

ZIP:07410-2802

Country:US

Phone:201-796-7100

CAGE:1B464

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

Ingred Name:WATER

CAS:7732-18-5

RTECS #:ZC0110000

&gt; Wt:50.

Ingred Name:HYDROFLUORIC ACID

CAS:7664-39-3

RTECS #:MW78

75000  
Fraction by Wt: 48-50%  
OSHA PEL:SEE TABLE Z-2  
ACGIH STEL:C2.6 MG/M3;C3 PPM  
EPA Rpt Qty:100 LBS  
DOT Rpt Qty:100 LBS

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

Reports of Carcinogenicity:NTP:UNKNOWN IARC:UNKNOWN OSHA:NO  
Health Hazards Acute and Chronic:EYE: CONTACT WITH LIQUID OR VAPOR  
CAUSES SEVERE BURNS AND POSSIBLE IRREVERSIBLE EYE DAMAGE.  
INGESTION: CAUSES SEVERE DIGESTIVE TRACT BURNS WITH ABDOMINAL  
PAIN,VOMITING, & POSSIBLE DEATH. MAY CAUSE S  
YSTEMIC TOXIC EFFECTS  
ON THE HEART.SKIN:FATAL, CAUSES SEVERE BURNS WITH DELAYED TISSUE  
DESTRUCTION. SUBSTANCE IS RAPIDLY ABSORBED THROUGH THE SKIN.  
PENETRATION MAY CONTINUE FOR SEVERAL DAYS.CAUSES SEVERE TISSUE  
NECROSIS AND BONE DESTRUCTION.INHALATION: HARMFUL IF INHALATED. MAY  
CAUSE IRRITATION OF THE UPPER RESPIRATORY TRACT WITH PAIN, BURNS,  
AND INFLAMMATION. MAY CAUSE PULMONARY EDEMA AND SEVERE RESPIRATORY  
DISTURBANCES.SEE OTHER INFO

Effects of Overexposure:HARM  
FUL IF INHALED. MAY CAUSE SKELETAL  
ABNORMALITIES. MAY CAUSE KIDNEY DAMAGE. CAUSES SEVERE EYE AND  
SKIN BURNS. CAUSES SEVERE DIGESTIVE AND RESPIRATORY TRACT  
BURNS.FATAL IF ABSORBED THROUGH THE SKIN. REPEATED INHALATION MAY  
CAUSE CHRONIC BRONCHITIS. CHRONIC EXPOSURE TO FLUORIDE COMPOUNDS  
MAY CAUSE SYSTEMIC TOXICITY.ACUTE EXPOSURE TO FLUORINE COMPOUNDS CAN  
LEAD TO DIGESTIVE TRACT BURNS AND ABDOMINAL PAIN. INGESTION CAUSES  
SALVATION, NAUSEA, VOMITING, ABDOMINAL PAIN, FE  
VER, LABORED  
BREATHING

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

First Aid:EYES: FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES,  
LIFTING UPPER AND LOWER LIDS. GET MEDICAL AID IMMEDIATELY. DO NOT  
ALLOW VICTIM TO RUB OR KEEP EYES CLOSED. EYE EXPOSURE MAY BE  
TREATED BY IRRIGATION WITH 1% CALCIUM GLUCONATE DROPS AFTER  
IMMEDIATE AND COPIOUS IRRIGATION WITH WATER FOR AT LEAST 30  
MINUTES. SKIN: FLUSH WITH PLENTY OF SOAP AND WATER FOR AT LEAST 15

MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. WASH CLOTHING BEFORE REUSE. SEE OTHER PRECAUTIONS.

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

Extinguishing Media:USE WATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS. FIRE.LARGE FIRES USE WATER SPRAY, FOG OR ALCOHOL-RESISTANT FOAM. SMALL FIRES; CO2, DRY CHEMICAL, DRY SAND, OR ALCOHOL-RESISTANT FOAM

Fire Fighting Procedures:AS IN ANY FIRE, WEAR A SELF-CONTAINED BREATHING APPARATUS IN PRESSURE-DEMAND

AND, MSHA/NIOSH (APPROVED OR EQUIVALENT), AND FULL PROTECTIVE GEAR. DURING A FIRE, IRRITATING AND HIGHLY TOXIC GASES MAY BE GENERATED BY THERMAL DECOMPOSITION OR COMBUSTION.

Unusual Fire/Explosion Hazard:REACTS WITH MOST METALS TO FORM HIGHLY FLAMMABLE HYDROGEN GAS WHICH CAN FORM EXPLOSIVE MIXTURES WITH AIR. CONTAINERS MAY EXPLODE IN THE HEAT OF A FIRE. VAPORS MAY BE HEAVIER THAN AIR. THEY CAN SPREAD ALONG THE GROUND AND COLLECT IN LOW OR CONFINED AREAS.SUBSTANCE ITSELF MAY DECOMPOSE UPON HEATING TO PRODUCE TOXIC FUMES

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

Spill Release Procedures:AVOID RUNOFF INTO STORM SEWERS AND DITCHES WHICH LEAD TO WATERWAYS. WEAR A SELF CONTAINED BREATHING APPARATUS AND APPROPRIATE PERSONAL PROTECTION. NEUTRALIZE SPILL WITH SODIUM BICARBONATE. USE WATER SPRAY TO DISPERSE THE GAS/VAPOR. REMOVE ALL SOURCES OF IGNITION. PROVIDE VENTILATION.

Neutralizing Agent:SODIUM BICARBONATE.

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

Handling and Storage Precautions:WASH THOROUGHLY AFTER HANDLING. REMOVE CONTAMINATED CLOTHING AND WASH BEFORE REUSE. USE WITH ADEQUATE VENTILATION. DO NOT GET ON SKIN OR IN EYES. DO NOT INGEST OR INHALE. STORE IN A COOL, DRY, WELL-VENTILATED AREA AWAY FROM INCOMPATIBLE SUBSTANCES. CORROSIVES AREA. DO NOT STORE IN METAL OR GLASS

Other Precautions:FIRST AID CONT: DISCARD CONTAMINATED CLOTHING IN A MANNER WHICH

LIMITS FURTHER EXPOSURE. DESTROY CONTAMINATED SHOES.  
FOR EXPOSURES TO HYDROFLUORIC ACID CONCENTRATIONS LESS THAN 20%,  
LIBERAL AND FREQUENT APPLICATIONS OF 2.5% CALCIUM GLUCONATE GEL  
MAY BE APPLIED. SEE OTHER INFORMATION.

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

Respiratory Protection:FOLLOW THE OSHA RESPIRATOR REGULATIONS FOUND IN  
29CFR 1910.134 OR EUROPEAN STANDARD EN 149. ALWAYS USE A NIOSH OR  
EUROPEAN EN 149 APPROVED RESPIRATOR WHEN NECESSARY.

Ventilation:USE PROCESS ENCLOSURE, LOCAL EXHAUST VENTILATION, OR OTHER  
ENGINEERING CONTROLS TO CONTROL AIRBORNE LEVELS BELOW RECOMMENDED  
EXPOSURE LIMITS.

Protective Gloves:APPROPRIATE PROTECTIVE GLOVES

Eye Protection:PROTECTIVE EYEGLASSES OR CHEMICAL SAFETY GOGGLES.

Other Protective Equipment:WEAR A CHEMICAL APRON. WEAR APPROPRIATE  
PROTECTIVE CLOTHING TO PREVENT SKIN EXPOSURE.

Work Hygienic Practices:WASH HANDS AFTER USE.

Supplemental Safety and Health

P/N: A146 10LB, A146 1LB, A

146-10LB, A146-1LB, A14610LB, A1461LB, A147

10LB, A147 1LB, A147-10LB, A147-1LB, A14710LB, A1471LB, A147J1LB,

A463 500, A463-1, A463-250, A463-500, A4631, A4632, A463250, A 513

500, A513-500, A513500, NC9394800.

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

HCC:C1

Boiling Pt:=66.1C, 151.F

Melt/Freeze Pt:=-71.C, -95.8F

Vapor Pres:NA

Vapor Density:2.21 AIR=1

Spec Gravity:1.2

pH:

90 ML/KG. CAS #7664-39-3: INHALATION MOUSE: LC50=342 PPM/1H.

INHALATION RAT

: LC50= 1276 PPM/1H. CARCINOGENICITY; CAS #

7732-18-5: NOT LISTED AS A CARCINOGEN BY ACGIH, IARC, NIOSH, NTP,

OSHA, OR CA PROP 65. CAS # 7664-39-3: ACGIH:A4- NOT LISTED AS A

HUMAN CARCINOGEN (AS F) (LISTED AS FLUORIDES). CALIFORNIA; NOT

LISTED. NIOSH: NOT LISTED. OSHA: NOT LISTED. IARC: SUPPLEMENT 7,

1987; MONOGRAPH 27, 1982. EPIDEMIOLOGY: NO INFORMATION AVAILABLE.

TERATOGENICITY: NO INFORMATION AVAILABLE. REPRODUCTIVE: TCLO-LOWER

PUBLISHED TOXIC CONCENTRATION: INHAL

ATION, ROD ENT-RAT:  
470UG/M3/4H: FEMALE1-22 DAYS.

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

Ecological:ECOTOXICITY: FISH (FRESH WATER) 60 PPM LETHAL (TIME PERIOD NOT SPECIFIED). ENVIRONMENTAL: NO INFORMATION REPORTED. PHYSICAL: BONE RETAINS 60% OF IV-INJECTED FLUORIDE AND THAT THE HALF-TIME FOR THIS UP TAKE IS ONLY ABOUT 13 MIN; BOTH BLOOD AND EXTRACELLULAR FLUID LEVELS THEREFORE DECR RAPIDLY. AFTER INGESTION OF SODIUM FLUORIDE, PLASMA FLUORID  
E LEVELS SHOW A MUCH SLOWER CHANGE WITH A  
HALF-LIFE OF AB OUT 3 HR.

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

Waste Disposal Methods:CHEMICAL WASTE GENERATORS MUST DETERMINE WHETHER A DISCARDED CHEMIAL IS CLASSIFIED AS A HAZARDOUS WASTE. US EPA GUIDELINES FOR THE CLASSIFICATION DETERMINATION ARE LISTED IN 40CFR 261.3. ADDITIONALL, WASTE GENERATORS MUST CONSULT STATE AND LCOAL HAZARDOUS WASTE REGULATIONS TO ENSURE COMPLETE AND AC CURATE CLASSI  
FICATION.

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

Transport Information:DOT;PROPER SHIPPING NAME: HYDROFUORIC ACID, SOLUTION POISON. HAZARD CLASS: 8. UN NUMBER: UN1790. PACKING GROUP:II. IATA; PROPER SHIPPING NAME; HYROFLUORIC ACID SOLUTION, HAZARD CLASS: 8. UN NUMBER: UN 1790. PACKING GROUP:II. IMO; PROPER SHIPPING NAME; HYDROFLUORIC ACID SOLUTION, HAZARD CLASS: 8. UN NUMBER: UN1790. PACKING GROUP:II

===== Regulatory Informati  
on =====

SARA Title III Information:SARA THRESHOLD PLANNING QUANTITIES (TPQ) CAS #7664-39-3: TPQ=100 LBS; RQ=100 LBS. SARA HAZARD CATEGORIES; CAS # 7664-39-3: ACUTE, CHRONIC. SARA SECTION 313; THIS MATERIAL CONTAINS HYDROFLUORIC ACID (C AS # 7664-39-3, 48-50%), WHICH IS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF SARA TITLE III AND 40 CFR PART 372

Federal Regulatory Information:TSCA; CAS #7732-18-5 IS LISTED ON THE TSCA INVENTORY. CAS #7664-3

9-3 IS LISTED ON TSCA INVENTORY. HEALTH AND SAFETY REPORTING; NONE OF THE COMPONENTS ARE ON THIS LIST. CERCLA REPORTING QUANTITIES (RQ) CAS # 7664-39-3: FINAL RQ=100 LBS. CLEAN AIR ACT-HAZARDOUS AIR POLLUTANT: CAS#7664-39-3 IS LISTED AS A HAZARDOUS AIR POLLUTANT. CLEAN AIR ACT-CLASS 1/ CLASS 2, OZONE DEPLETORS: NONE OF THE COMPONENTS ARE ON THIS LIST. CLEAN WATER ACT: CAS#7664-39-3 IS LISTED AS HAZARDOUS SUBSTANCE UNDER THE CWA. OSHA -HIGHLY HAZARDOUS: CAS#7664-39-3 IS CONSIDERED HIGHLY HAZARDOUS BY OSHA.

State Regulatory Information: STATE RIGHT TO KNOW; HYDROFLUORIC ACID CAN BE FOUND ON THE FOLLOWING STATE RIGHT TO KNOW LISTS: CALIFORNIA, NEW JERSEY, FLORIDA, PENNSYLVANIA, MINNESOTA, MASSACHUSETTS. CALIFORNIA PROP 65: NONE OF THE COMPONENTS ARE ON THIS LIST. CALIFORNIA NO SIGNIFICANT RISK LEVEL: NO INFORMATION FOUND. CAS # 7664-39-3 IS LISTED ON CANADA'S INGREDIENT LIST.

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===== Other Information =====  
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