

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 #:MW7

875000

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

SYSTEMIC 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:HAR

MIFUL 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

CONFUSION, NAUSEA, VOMITING, ABDOMINAL PAIN, F

EVER, 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 1

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; CO<sub>2</sub>, DRY CHEMICAL, DRY SAND, OR ALCOHOL-RESISTANT FOAM

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

MAND, 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.

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===== 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

H 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,

A146-10LB, 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 RA

T : 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: INHA

LATION, ROD ENT-RAT:  
470UG/M3/4H: FEMALE 1-22 DAYS.

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Ecological Information  
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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 UPTAKE IS ONLY ABOUT 13 MIN; BOTH BLOOD AND EXTRACELLULAR FLUID LEVELS THEREFORE DECREASE RAPIDLY. AFTER INGESTION OF SODIUM FLUORIDE, PLASMA FLUORIDE LEVELS SHOW A MUCH SLOWER CHANGE WITH A HALF-LIFE OF ABOUT 3 HR.

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Disposal Considerations  
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Waste Disposal Methods: CHEMICAL WASTE GENERATORS MUST DETERMINE WHETHER A DISCARDED CHEMICAL IS CLASSIFIED AS A HAZARDOUS WASTE. US EPA GUIDELINES FOR THE CLASSIFICATION DETERMINATION ARE LISTED IN 40CFR 261.3. ADDITIONALLY, WASTE GENERATORS MUST CONSULT STATE AND LOCAL HAZARDOUS WASTE REGULATIONS TO ENSURE COMPLETE AND ACCURATE CLASSIFICATION.

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

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Regulatory Information  
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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 (CAS # 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-

39-3 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.

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