



# HI-VALLEY CHEMICAL

## LABORATORY PRODUCTS

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# SAFETY DATA SHEET

## Hi Valley Chemical

### Hydrofluoric Acid 70%

#### 1 PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier:** Hydrofluoric Acid 70%  
**SDS Number:** R-031  
**Product Code:** 514359-1, 514359-55  
**Supplier Details:** High Valley Products, Inc.  
1134 West 850 North  
Centerville, Utah 84014  
**Emergency:** PERS: 800-633-8253  
**Phone:** 801-295-9591  
**Email:** sales@hvchemical.com  
**Web:** www.hvchemical.com

#### 2 HAZARDS IDENTIFICATION

##### Classification of the Substance or Mixture

###### GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

- Health, Acute toxicity, 2 Oral
- Health, Acute toxicity, 1 Dermal
- Health, Skin corrosion/irritation, 1 A
- Health, Serious Eye Damage/Eye Irritation, 1
- Health, Acute toxicity, 2 Inhalation

##### GHS Label Elements, Including Precautionary Statements

GHS Signal Word: **DANGER**

###### GHS Hazard Pictograms:



###### GHS Hazard Statements:

- H300 - Fatal if swallowed
- H310 - Fatal in contact with skin
- H314 - Causes severe skin burns and eye damage
- H318 - Causes serious eye damage
- H330 - Fatal if inhaled

###### GHS Precautionary Statements:

- P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
- P264 - Wash skin thoroughly after handling.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P284 - Wear respiratory protection.
- P302+350 - IF ON SKIN: Gently wash with soap and water.
- P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
- P310 - Immediately call a POISON CENTER or doctor/physician.

#### 3 COMPOSITION/INFORMATION ON INGREDIENTS

##### Ingredients:

Cas#	%	Chemical Name
7664-39-3	70%	Hydrofluoric acid

## 4 FIRST AID MEASURES

- Inhalation:** If inhaled, remove to fresh air and call a physician for instructions. In case of difficulty breathing, use oxygen assistance. Get medical attention if condition is critical.
- Skin Contact:** Remove contaminated clothing immediately. Wash with soap and water. Consult a physician.
- Eye Contact:** Immediately flush eyes with large amounts of water for at least 15 minutes, lifting eyelids occasionally to facilitate irrigation.
- Ingestion:** DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Hydrofluoric (HF) acid burns require immediate and specialized first aid and medical treatment. Symptoms may be delayed up to 24 hours depending on the concentration of HF. After decontamination with water, further damage can occur due to penetration/absorption of the fluoride ion. Treatment should be directed toward binding the fluoride ion as well as the effects of exposure. Skin exposures can be treated with a 2.5% calcium gluconate gel repeated until burning ceases. More serious skin exposures may require subcutaneous calcium gluconate except for digital areas unless the physician is experienced in this technique, due to the potential for tissue injury from increased pressure. Absorption can readily occur through the subungual areas and should be considered when undergoing decontamination. Prevention of absorption of the fluoride ion in cases of ingestion can be obtained by giving milk, chewable calcium carbonate tablets or Milk of Magnesia to conscious victims. Conditions such as hypocalcemia, hypomagnesemia and cardiac arrhythmias should be monitored for, since they can occur after exposure. Move out of dangerous area.

## 5 FIRE FIGHTING MEASURES

Extinguishing media  
 Suitable extinguishing media  
 Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture  
 No data available

Advice for firefighters  
 Wear self-contained breathing apparatus for firefighting if necessary.

Further information  
 No data

## 6 ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures:

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

### Environmental precautions:

Do not let product enter drains.

### Methods and materials for containment and cleaning up:

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

## 7 HANDLING AND STORAGE

- Handling Precautions:** Avoid contact with eyes, skin, or clothing.  
 Avoid breathing vapors or mist.
- Storage Requirements:** Keep container tightly closed in a dry and well ventilated area.

**Personal Protective Equipment:**

Hydrofluoric acid (7664-39-3) [70%]

Personal protective equipment

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Full contact Material: Chloroprene Minimum layer thickness: 0.6 mm Break through time: > 480 min Material tested: Camapren (KCL 722 / Aldrich Z677493, Size M) Splash contact Material: Nature latex/chloroprene Break through time: 180 min Material tested: Lapren (KCL 706 / Aldrich Z677558, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Eye protection: Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection: Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

**Exposure Guidelines****Hydrofluoric acid (7664-39-3) [70%]****Components with workplace control parameters**

**STEL 6 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000**

**TWA 0.5 ppm USA. ACGIH Threshold Limit Values (TLV) Fluorosis Upper Respiratory Tract, Lower Respiratory Tract, skin & eye irritation Substances for which there is a Biological Exposure Index or Indices (see BEI section)**

**C 2 ppm USA. ACGIH Threshold Limit Values (TLV) Fluorosis Upper Respiratory Tract, Lower Respiratory Tract, skin & eye irritation Substances for which there is a Biological Exposure Index or Indices (see BEI section)**

**TWA 3 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000**

**TWA 3 ppm USA. Occupational Exposure Limits (OSHA) - Table Z2 Z37.28- 1969**

**TWA 2.5 mg/m3 USA. Occupational Exposure Limits (OSHA) - Table Z- 1 Limits for Air Contaminants**

**TWA 2.5 mg/m3 USA. Occupational Exposure Limits (OSHA) - Table Z- 1 Limits for Air Contaminants**

CAS number varies with compound

**TWA**      3 ppm                      **USA. NIOSH Recommended Exposure Limits**  
              2.5 mg/m<sup>3</sup>

**C**            6 ppm                      **USA. NIOSH Recommended Exposure Limits**  
              5 mg/m<sup>3</sup>  
**15 minute ceiling value**  
**See Table Z-2**

## 9                      **PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Colorless.
<b>Physical State:</b>	Liquid
<b>Odor:</b>	Pungent, acidic
<b>Odor Threshold:</b>	No data available
<b>Solubility:</b>	No data available
<b>Spec Grav./Density:</b>	1.23
<b>Viscosity:</b>	No data available
<b>Boiling Point:</b>	60 °C ( 140 °F )
<b>Freezing/Melting Pt.:</b>	-100 °C ( -148 °F )
<b>Flash Point:</b>	No data available
<b>Partition Coefficient:</b>	No data available
<b>Vapor Pressure:</b>	from 14 - 470 mbar
<b>Vapor Density:</b>	2.4
<b>pH:</b>	<1
<b>Evap. Rate:</b>	No data available
<b>Auto-Ignition Temp:</b>	No data available
<b>Decomp Temp:</b>	No data available
<b>UFL/LFL:</b>	No data available

## 10                     **STABILITY AND REACTIVITY**

<b>Reactivity:</b>	No data available
<b>Chemical Stability:</b>	Stable under recommended storage conditions.
<b>Conditions to Avoid:</b>	No data available
<b>Materials to Avoid:</b>	No data available.
<b>Hazardous Decomposition:</b>	formed under fire conditions. Hydrogen fluoride

## 11                     **TOXICOLOGICAL INFORMATION**

Hydrofluoric acid (7664-39-3) [70%]

Information on toxicological effects

Acute toxicity:  
Oral LD50 no data available  
Inhalation LC50  
Dermal LD50  
Other information on acute toxicity

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: Eyes: no data available

Respiratory or skin sensitisation: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Hydrofluoric acid)

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System):  
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System):  
no data available

Aspiration hazard: no data available

Potential health effects: Inhalation Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Ingestion May be fatal if swallowed. Skin May be fatal if absorbed through skin. Causes skin burns. Eyes Causes eye burns. Causes severe eye burns.

Signs and Symptoms of Exposure: Fluoride ion can reduce serum calcium levels possibly causing fatal hypocalcemia., Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., necrosis of the skin, Material can cause severe burns and blistering which may not be immediately painful or visible. The full extent of tissue damage may not exhibit itself for 12-24 hours after exposure.

Synergistic effects: no data available

Additional Information:

RTECS: Not available

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## **ECOLOGICAL INFORMATION**

Hydrofluoric acid (7664-39-3) [70%]

Information on ecological effects

Toxicity: no data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

## 13 DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations.

## 14 TRANSPORT INFORMATION

UN1790, Hydrofluoric acid, with more than 60 percent strength, 8,(6.1), PGI

## 15 REGULATORY INFORMATION

Component (CAS#) [%] - CODES

RQ(100LBS), Hydrofluoric acid (7664-39-3) [70%] CERCLA, CSWHS, EHS302, EPCRAWPC, HAP, MASS, NJEHS, NJHS, OSHAPSM, OSHAWAC, PA, SARA313, TOXICRCRA, TSCA, TXAIR, TXHWL

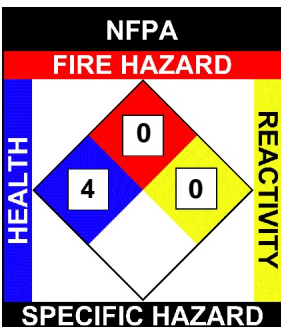
Regulatory CODE Descriptions

RQ = Reportable Quantity  
CERCLA = Superfund clean up substance  
CSWHS = Clean water Act Hazardous substances  
EHS302 = Extremely Hazardous Substance  
EPCRAWPC = EPCRA Water Priority Chemicals  
HAP = Hazardous Air Pollutants  
MASS = MA Massachusetts Hazardous Substances List  
NJEHS = NJ Extraordinarily Hazardous Substances  
NJHS = NJ Right-to-Know Hazardous Substances  
OSHAPSM = OSHA Chemicals Requiring process safety management  
OSHAWAC = OSHA workplace Air Contaminants  
PA = PA Right-To-Know List of Hazardous Substances  
SARA313 = SARA 313 Title III Toxic Chemicals  
TOXICRCRA = RCRA Toxic Hazardous wastes (U-List)  
TSCA = Toxic Substances Control Act  
TXAIR = TX Air Contaminants with Health Effects Screening Level  
TXHWL = TX Hazardous waste List

## 16 OTHER INFORMATION

NFPA: Health = 4, Fire = 0, Reactivity = 0, Specific Hazard = n/a

HMIS III: Health = 4(Chronic), Fire = 0, Physical Hazard = 0



HMIS	
HEALTH	<input checked="" type="checkbox"/> 4
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	<input type="checkbox"/>

### Disclaimer:

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