

**Material Safety Data Sheet**

Version 3.0  
Revision Date 02/19/2010  
Print Date 04/08/2010

**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : Hydrofluoric acid

Product Number : 01068  
Brand : Sigma-Aldrich

Company : Sigma-Aldrich Canada, Ltd  
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OAKVILLE ON L6H 6J8  
CANADA

Telephone : +19058299500  
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Emergency Phone # : 800-424-9300

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Formula : HF

CAS-No.	EC-No.	Index-No.	Concentration
<b>Hydrofluoric acid</b>			
7664-39-3	231-634-8	009-003-00-1	>= 51 - <= 55 %
<b>Water</b>			
7732-18-5	231-791-2	-	>= 45 - <= 49 %

**3. HAZARDS IDENTIFICATION****Emergency Overview****Target Organs**

Liver, Kidney

**WHMIS Classification**

D1A	Very Toxic Material Causing Immediate and	Highly toxic by ingestion
D2B	Serious Toxic Effects	Highly toxic by skin absorption
E		Highly toxic by inhalation
		Moderate eye irritant
		Corrosive

**HMIS Classification**

Health hazard:	4
Chronic Health Hazard:	*
Flammability:	0
Physical hazards:	0

**Potential Health Effects**

<b>Inhalation</b>	May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
<b>Skin</b>	Causes skin burns. May be fatal if absorbed through skin.
<b>Eyes</b>	Causes eye burns.
<b>Ingestion</b>	May be fatal if swallowed. Causes burns.

#### 4. FIRST AID MEASURES

##### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

##### If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

##### In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

##### In case of eye contact

Continue rinsing eyes during transport to hospital. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

##### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 5. FIRE-FIGHTING MEASURES

##### Flammable properties

Flash point no data available

Ignition temperature no data available

##### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

##### Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

#### 6. ACCIDENTAL RELEASE MEASURES

##### Personal precautions

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

##### Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

##### Methods for 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

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Normal measures for preventive fire protection.

##### Storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
Hydrofluoric acid	7664-39-3	(c)	3 ppm 2.3 mg/m3	2007-01-01	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		C	2 ppm	2006-11-29	Canada. British Columbia OEL
		TWAE V	0.5 ppm	2005-12-17	Canada. Ontario OELs
		CEV	2 ppm	2005-12-17	Canada. Ontario OELs
		C	3 ppm 2.6 mg/m3	2006-12-29	Canada. Quebec OELs
Remarks	A substance which may not be recirculated in accordance with section 108				

### 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.

#### Eye protection

Tightly fitting safety goggles. Faceshield (8-inch minimum).

#### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

#### Hygiene measures

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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form liquid

### Safety data

pH no data available

Melting point no data available

Boiling point no data available

Flash point no data available

Ignition temperature no data available

Lower explosion limit no data available

Upper explosion limit    no data available  
Water solubility            no data available

## 10. STABILITY AND REACTIVITY

### Storage stability

Stable under recommended storage conditions.

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Hydrogen fluoride

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

no data available

### Irritation and corrosion

no data available

### Sensitisation

no data available

### Chronic exposure

IARC:                No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

### Potential Health Effects

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<b>Ingestion</b>	May be fatal if swallowed. Causes burns.
<b>Target Organs</b>	Liver, Kidney,

## 12. ECOLOGICAL INFORMATION

### Elimination information (persistence and degradability)

no data available

### Ecotoxicity effects

no data available

### Further information on ecology

no data available

## 13. DISPOSAL CONSIDERATIONS

### Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

### Contaminated packaging

Dispose of as unused product.

#### 14. TRANSPORT INFORMATION

##### DOT (US)

UN-Number: 1790 Class: 8 (6.1) Packing group: II  
Proper shipping name: Hydrofluoric acid  
Reportable Quantity (RQ): 182 lbs  
Marine pollutant: No  
Poison Inhalation Hazard: No

##### IMDG

UN-Number: 1790 Class: 8 (6.1) Packing group: II EMS-No: F-A, S-B  
Proper shipping name: HYDROFLUORIC ACID  
Marine pollutant: No

##### IATA

UN-Number: 1790 Class: 8 (6.1) Packing group: II  
Proper shipping name: Hydrofluoric acid

#### 15. REGULATORY INFORMATION

##### DSL Status

All components of this product are on the Canadian DSL list.

##### WHMIS Classification

D1A	Very Toxic Material Causing Immediate and	Highly toxic by ingestion
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		Corrosive

#### 16. OTHER INFORMATION

##### Further information

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