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Material Safety Data Sheet (MSDS)

Hydrofluoric acid 70%

Section 1 - Chemical Product and Company Identification

Product Name: Hydrofluoric acid 70%
Manufacturer: Jiangxi Tianxing Chemical Co., Ltd.
Zhuxiaoshan, Chongren, Fuzhou City,
Jiangxi Prov., China

Importer:

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
7732-18-5	H ₂ SO ₄ , H ₂ SIF ₆ , WATER	30%
7664-39-3	Hydrofluoric acid	70%

Section 3 - Health Hazard

EMERGENCY OVERVIEW

Clear, colorless, corrosive fuming liquid with an extremely acrid odor. May produce white fumes if spilled. Liquid can cause severe burns to all parts of the body. Specialized medical treatment is required for all exposures.

Potential Health Effects

Eye: Contact with liquid or vapor causes severe burns and possible irreversible eye damage.

Skin: Causes severe burns with delayed tissue destruction. Initial contact may be painless but will penetrate tissue causing severe necrosis and bone destruction.

Ingestion: May cause systemic toxic effects on the heart, liver, and kidneys. Depletes calcium levels in the body which if left untreated can lead to hypocalcemia and death.

Inhalation: May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung edema. May cause pulmonary edema and severe respiratory disturbances. Inhalation may be fatal as a result of spasm, inflammation, edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Depletes calcium levels in the body which if left untreated can lead to hypocalcemia and death.

Chronic: Repeated inhalation may cause chronic bronchitis. Prolonged or repeated exposure may cause permanent bone structure abnormalities.

Section 4 - First Aid Measures

Eyes: Get medical aid immediately. Gently lift eyelids and flush continuously with water. Eye exposure may be treated by irrigation with 1% calcium gluconate drops after immediate and copious irrigation with water for at least 15 minutes.

Skin: Get medical aid immediately. Rinse area with large amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. For exposures to hydrofluoric acid concentrations less than 20%, liberal and frequent applications of a 2.5% calcium gluconate gel may be applied.

Ingestion: Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: delayed and persistent symptoms, observe patient closely for 48 hrs. Prompt action is essential in all cases of contact.

Antidote: The use of infiltration therapy and intra-arterial therapy for hydrofluoric acid burns resulting from concentrations greater than 20% should be made by qualified medical personnel.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Substance is noncombustible. Reacts with most metals to form highly flammable hydrogen gas which can form explosive mixtures with air.

Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire.

Flash Point: Not available.

Autoignition Temperature: Not available.

Explosion Limits, Lower: Not available.

Upper: Not available.

Section 6 - Accidental Release Measures

(Always wear recommended personal protective equipment)

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container.

Section 7 - Handling and Storage

(Always wear recommended personal protective equipment)

Handling: Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Use only in a chemical fume hood.

Storage: Store in a cool, dry place. Store in a tightly closed container. Corrosives area.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Personal Protective Equipment

Eyes: As a minimum, wear hard hat, chemical safety goggles (plastic lenses), and full face plastic shield. For protection, use air-supplied hydrofluoric acid resistant hood.

Skin: Wear appropriate protective jacket, trousers, boots and gloves to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations

Additional Recommendations:

Eyewash and quick-drench shower facilities, protected from freezing, should be available where HF is stored or handled.

Section 9 - Physical and Chemical Properties

Physical State: Clear liquid

Appearance: colorless

Odor: strong odor - irritating odor

pH: Not available.

Vapor Pressure: Not available.

Relative Density (water=1): 1.26 (75%)

Relative Density (air=1) : 1.27

Bolling Point: 120 (35.3%)

Freezing/Melting Point:-83.1 deg C (pure)

Decomposition Temperature: Not available.

Solubility: soluble in water

Molecular Formula :HF

Molecular Weight:20

Section 10 - Stability and Reactivity

Chemical Stability: Stable

Conditions to Avoid: Incompatible materials, metals.

Hazardous Decomposition Products: Fluoride fumes.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

acute toxicity : LD50

Middling and chronic toxicity: Rabbit absorb 33-41mg/m³, average 20mg/m³, pass 1-5.5 months, may cause mucous membrane irritation, become thin, difficult to breath, hemoglobin decreased, reticulocyte increased, some animal will die.

Teratogenicity: Embryo or fetus: death, ihl-rat TCLo:4980 ug/m³/4H (1-22 D preg).

Reproductive Effects: ihl-rat TCLo:4980 ug/m³

Mutagenicity: dnd-dmg-ihl 1300 ppb/6Wsln-dmg-ihl 2900 ppbEPA Genetox Program 1988, Positive: D melanogaster Sex linked lethal

Other Studles: None.

Section 12 - Circumstance Information

No information available.

Section 13 - Disposal Considerations

Dispose as Gov. request.

Section 14 - Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG
Shipping Name:	HYDROFLUORIC ACID				No information available.
Hazard Class:	8.1				
UN Number:	UN1790				
Packing package:	Tank or plastic drums				

Section 15 - Statute Information

Chemistry dangerous cargo safety management regulation,

Implementing rules of Chemistry dangerous cargo safety management regulation

Regulation of safe to use chemical in workplace

These regulation make the detail rules on safety using, producing, storing, transporting, loading and unloading.

It belongs to class 8.1 acidity corrosion product as GB13690-92

Section 16 - Others

Risk and Safety Phrases

None specified - Exercise all due care in use

TSCA: Listed substance.