



Hydrofluosilicic Acid

MSDS Date: July 19, 1999
Emergency Contact: 1-800-424-9300

SECTION I

PRODUCT NAME: Hydrofluosilicic Acid
SYNONYMS: Fluosilicic Acid, Fluorosilicic Acid
CHEMICAL NAME: Fluorosilicic Acid
FORMULA: H_2SiF_6

DOT SHIPPING INFORMATION: Fluorosilicic Acid, 8,
UN 1778, PG II

SECTION II - HAZARDOUS INGREDIENTS

This material contains no ingredients which are known by Thatcher Company to be hazardous unless listed below.

HAZARDOUS MATERIAL	CAS NUMBER	w/w %	EXPOSURE LIMITS IN AIR
Hydrofluosilicic Acid	16961-83-4	10-30	Not established
Hydrogen Fluoride	7664-39-3	0-1%	PEL/TLV 3.0 ppm Ceiling
Water		70-90%	N/A

The specific identity of some ingredients may be withheld for confidential business purposes. However, all known potential health effects from exposure to these ingredients are being addressed.

This product is subject to SARA section 313 reporting requirements

SECTION III - PHYSICAL DATA

BOILING POINT (F): 225°F

Melting Point: 1.4 - 4°F

SPECIFIC GRAVITY ($H_2O=1$): 1.17 (25% acid)

pH: 1.5 - 2 (10% soln)

VAPOR PRESSURE (mm Hg @ 20°C): 24 @ 77°F (25% acid)

SOLUBILITY IN WATER (% by weight): Completely soluble

APPEARANCE AND ODOR: Colorless fuming liquid; pungent, sour penetrating odor.

SECTION IV - FIRE AND EXPLOSION DATA

FLASH POINT: Not flammable

FLAMMABLE LIMITS:

Lel: N/A Uel: N/A

EXTINGUISHING MEDIA:

Will not ignite.

SPECIAL FIRE-FIGHTING PROCEDURES:

Cool containers with water using fog nozzles. Wear acid-proof personal protective gear and use self contained breathing apparatus.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:**

Hydrofluosilicic Acid reacts with many metals, giving off highly flammable hydrogen gas which may form explosive mixtures.

SECTION V - REACTIVITY DATA**STABILITY:**

UnStable

HAZARDOUS POLYMERIZATION:

Will not occur.

CONDITIONS OR MATERIALS TO AVOID:

Metals, glass, stoneware, alkali, strong concentrated acids such as sulfuric acid and perchloric acids.
Heating increases vapor pressure.

HAZARDOUS DECOMPOSITION PRODUCTS:

Will decompose to hydrogen fluoride and silicon tetrafluoride on heating. Hydrogen (which forms explosive mixtures with air) formed on contact with metals.

SECTION VI - HEALTH HAZARD DATA

NFPA HAZARDOUS RATING: Health = 2 Flammability = 0 Reactivity = 1

CARCINOGENIC LISTING:

NTP: No ingredients listed in this section.

IARC MONOGRAPHS: No ingredients listed in this section.

OSHA 29 CFR 1910: No ingredients listed in this section.

ENTRY ROUTES & EFFECTS OF OVEREXPOSURE:

Contact: Skin contact may cause severe irritation, dermatitis and burns. Contact with eyes can result in severe irritation, burns and keratoconjunctivitis.

Inhalation: May lead to severe irritation, corrosion, and congestion of respiratory system. Bronchospasm, pulmonary edema, nausea, vomiting, weakness, and stiff joints may occur.

Ingestion: Vomiting, diarrhea, thirst, cyanosis and symptoms of inhalation exposure can occur.

STATEMENT OF PRACTICAL TREATMENT:

Contact: Immediately remove contaminated clothing and wash exposed area thoroughly with soap and water. Seek immediate medical attention. For eyes, flush with large amounts of cool water for at least 15 minutes and seek immediate medical attention.

Inhalation: Remove to fresh air. If breathing has stopped, give mouth-to-mouth resuscitation and seek immediate medical attention.

Ingestion: Do not induce vomiting. Get immediate medical attention.

**SECTION VII - SPECIAL PRECAUTIONS****HANDLING AND STORAGE PRECAUTIONS:**

Store in closed plastic containers, away from heat. Do not use metal, glass or stoneware. Avoid contact with eyes, skin and clothing. Do not breathe vapor.

STEPS TO BE TAKEN IF MATERIAL SPILLS OR LEAKS:

Dike and dilute with water to prevent evolution of vapors. Slowly neutralize, preferably with limestone. The purchaser should establish a spill prevention, control and counter-measure plan. This plan should include procedures for proper storage as well as cleanup of spills and leaks. The procedure should conform to safe practices and provide for proper recovery or disposal. Depending on the quantity spilled, notification of the National Response Center (800-424-8802) may be required in the case of hazardous substances. (See EPA, DOT and various state and local regulations).

WASTE DISPOSAL METHOD:

Used or unused product should be tested to determine hazard status and disposal requirements under federal, state and local laws and requirements.

SECTION VIII - SPECIAL PROTECTION INFORMATION**RESPIRATORY PROTECTION:**

NIOSH/MSHA respirators approved for magnitude of exposure. Use self-contained breathing apparatus during fire.

EYE PROTECTION:

Chemical safety goggles. Wear face shield to prevent facial contact.

SKIN PROTECTION:

Wear appropriate hand and body protection i.e. neoprene gloves and vinyl protective clothing.

OTHER PROTECTIVE EQUIPMENT:

Safety shower and eyewash should be available in the vicinity of work area.

ACGIH = American Conference of Governmental Industrial Hygienists

CL = Ceiling Level

IARC = International Agency for Research on Cancer: Monographs

OSHA = Occupational Safety and Health Administration

N/A = Not Applicable

NTP = National Toxicology Program: Annual Report on Carcinogens

PEL = Permissible Exposure Level (OSHA)

TLV = Threshold Limit Value (ACGIH)

TWA = Time Weighted Average over 8 Hours

STEL = Short Term Exposure Limit (ACGIH)

ND = Not Determined

This information is, to the best of our knowledge, accurate but may not be complete. THATCHER COMPANY furnishes this information in good faith, but without warranty, representation or guarantee of its accuracy, completeness, or reliability.