

Section 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: ASTM E407-11 2% HF Etchant
Part Number: ASTM11-(all sizes)
Manufacturer: Sturbridge Metallurgical Services Inc.
City, State, Zip: Sturbridge MA 01566
Phone Number: 508-347-5288
Emergency Phone: **CHEMTREC 1-800-424-9300**

Section 2: Hazard(s) Identification

Hazardous classification of the substance or mixture:

Hazard Class	Category Code
Skin Corrosion	1A
Serious Eye Damage	1

Signal word: Danger

Pictogram:



Hazard statement(s):

H314-Cause severe skin burn and eye damage.

Precautionary statement(s):

P280-Wear protective gloves/protective clothing/eye/ protection/face protection.

Response statement(s):

P303+P361+P353 IF ON SKIN (or hair): remove/take off immediately all contaminated clothing. Rinses skin with water/shower.
P305+P351+P338+P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.

Storage statement(s):

P405 Store locked up.

Disposal statement(s):

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified: No information.

Label elements: See tables above

HMIS Ratings:

Health: 2
Flammability: 0
Reactivity: 0

NFPA Ratings:

Health: 2
Flammability: 0
Reactivity: 2
Special hazard: None

Section 3: Composition/Information on Ingredients

Component	CAS No.	Concentration
Hydrofluoric acid	7664-39-3	2%
Water	7732-18-5	Balance

Section 4: First-Aid Measures

General information: First aid procedures should be pre-planned for Hydrofluoric Acid emergencies.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical aid immediately.

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

Skin contact: Wash the areas of contact with water for at least 15 minutes while removing contaminated clothing and shoes. Rub in calcium gluconate solution or calcium gluconate gel immediately. Get medical aid immediately.

Ingestion: Do not induce vomiting. Rinse mouth. Get medical aid immediately.

Most important symptoms and effects, both acute and delayed: This product contains hydrofluoric acid which is a contact poison with the potential for deep, initially painless burns and ensuing bone/tissue damages.

Recommendation for immediate medical care and special treatment needed, when necessary: Use the specific treatment for hydrofluoric acid.

Section 5: Fire-Fighting Measures

Extinguishing media: Water, dry chemical, foam, or carbon dioxide.

Special hazards arising from the substance or mixture: In the case of fire, the following can be released: acidic liquid.

Special protective equipment or precautions for firefighters: Wear full protective clothing and a self-contained respirator.

Section 6: Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures: This product contains hydrofluoric acid which is a contact poison. Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation.

Environmental precautions: Do not allow the material to be released to the environment without proper governmental permits.

Methods and materials for containment and cleaning up: Neutralize the spill with sodium carbonate or a soda ash-slaked lime mixture (50:50). Absorb with a liquid binding material (sand, diatomite, acid binder, universal binders, sawdust). Dispose of contaminated material as waste according to section 13. Ensure adequate ventilation.

Section 7: Handling and Storage

Precautions for safe handling: Wear protective equipment. Ensure good ventilation in the workplace. Open and handle with care.

Condition for safe storage: Keep container tightly sealed. Store in an approved corrosive liquid storage container/area.

Incompatibilities: Store away from strong bases and reducing agents.

Specific storage requirement(s): No information.

Section 8: Exposure Controls/Personal Protection Exposure Limits

Component	CAS No.	ACGIH TLV	OSHA PEL
Hydrofluoric	7664-39-3	3 ppm	3 ppm
Water	7732-18-5	NA	NA

Engineering controls: Use general and/or local exhaust ventilation to control the vapor concentration.

Eye protection: Wear safety glasses or goggles.

Skin protection: Wear protective clothing and chemical-resistant gloves.

Respiratory protection: Use a self-contained respiratory device in an emergency situation.

Section 9: Physical and Chemical Properties

Appearance:	Clear, colorless liquid
UFL/LEL:	Not determined
LFL/LEL:	Not determined
Odor:	Odorless
Vapor pressure:	Not determine
Odor threshold:	Not determined
Vapor density:	Not determined
pH:	Not determined
Relative density:	Approximately 1 g/cm ³
Melting Point/Freezing point:	Approximately 0 °C
Solubility in water:	Miscible
Boiling point/boiling range:	Approximately 100 °C
Flash point:	Not determined
Evaporation Rate:	Not determined
Flammability (solid, gas):	Not applicable
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	Not determined

Section 10: Stability and Reactivity

Reactivity: No information.

Chemical stability: Stable under recommended conditions.

Stabilizer(s): Not required.

Safety issues that may arise should the product change in appearance: No information.

Thermal decomposition/ conditions to Avoid: Decomposition will not occur if used and stored according to specifications.

Possibility of hazardous reactions: see incompatibilities.

Incompatibilities: Strong bases and reducing agents. May react with metallic aluminum and generate hydrogen gas.

Hazardous decomposition products: Hydrogen fluoride, hydrogen.

Section 11: Toxicological Information

For Hydrofluoric Acid:

Acute toxicity:

Inhalation rat LD50/1H: 1276 ppm/1H.

Other exposure effect:

Oral: Toxic effect.

On the Skin: Strong corrosive effect.

On the Eye: Strong corrosive effect.

Sensitization: No sensitizing effects known.

Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. No classification data on carcinogenic properties of this material is available from NTP, IARC or OSHA. Danger through skin absorption.

Section 12: Ecological Information

Toxicity:

Aquatic toxicity: No information.

Persistence and degradability: No information.

Behavior in environmental system:

Bioaccumulative potential: No information.

Mobility in soil: No information.

Additional ecological information: No information.

Other adverse effects: No information.

Section 13: Disposal Considerations

Place in a chemical waste container for proper disposal in an approved waste disposal facility. Dispose of the content and container in accordance with local, regional, national, and international regulations.

Section 14: Transport Information

D.O.T. shipping name: Corrosive liquid, acidic, inorganic, n.o.s.
(Hydrofluoric Acid)

D.O.T. hazard class: 8

UN number: UN3264

Packing group: III

Section 15: Regulatory Information

Not meant to be all inclusive, selected regulation represented OSHA status: These items meet the OSHA Hazard Communication Standard (29 CFR 1910.1200) definition of a hazardous material.

TSCA status: All components are listed.

Section 16: Other Information

Disclaimer: The information above is believed to be accurate and represents the best information currently available to us. SMS, Inc. makes no warranty, express or implied, as to its accuracy, and we assumes no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. We shall not be liable for any damages to person or property resulting from its use.