



Health	3
Fire	0
Reactivity	0
Personal Protection	H

Material Safety Data Sheet

Ammonium Fluoride 40% MSDS

Section 1: Chemical Product and Company Identification

Product Name: Ammonium Fluoride 40%

Catalog Codes: SLA1021

CAS#: Mixture.

RTECS: Not applicable.

TSCA: TSCA 8(b) inventory: Water; Ammonium fluoride

CI#: Not available.

Synonym: Ammonium Fluoride 40%

Chemical Name: Not applicable.

Chemical Formula: Not applicable.

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:

1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Water	7732-18-5	60
Ammonium fluoride	12125-01-8	40

Toxicological Data on Ingredients: Ammonium fluoride LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Potential Acute Health Effects:

Very hazardous in case of skin contact (irritant), of ingestion, . Hazardous in case of skin contact (corrosive), of eye contact (irritant, corrosive). Slightly hazardous in case of inhalation (lung sensitizer). Non-corrosive for lungs. Severe over-exposure can result in death.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to bones. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

Skin Contact:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately. While waiting for medical attention, it has been shown that flushing the affected area with water for at least one minute and then massaging HF Antidote Gel into the wound until there is a cessation of pain is a most effective first aid treatment. HF Antidote Gel contains Calcium Gluconate which combines with HF for insoluble Calcium Fluoride, thus preventing the extraction of calcium from the body tissue and bones. Another alternative first aid treatment, after thorough washing of the burned area, is to immerse the burned area in a solution of 0.2% iced aqueous Hyamine 1622 or 0.13% iced aqueous Zephiran Chloride. If immersion is impractical, towels should be soaked with one of the above solutions and used as compresses for the burn area. Hyamine 1622 is a trade name for Tetracaine Benzethonium Chloride. Zephiran is a trade name for Benzalkonium Chloride. Again, seek medical attention as soon as possible for all burns regardless of how minor they may appear initially.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. **WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances: Non-explosive in presence of open flames and sparks, of shocks.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill:

Poisonous liquid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Keep locked up.. Keep container dry. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, metals, acids, alkalis. May corrode glass. Store in an appropriate container.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 25°C (77°F).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

Ammonium fluoride TWA: 2.5 from ACGIH (TLV) [United States] Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Not available.

Taste: Not available.

Molecular Weight: Not applicable.

Color: Clear Colorless.

pH (1% soln/water): 6 [Acidic.]

Boiling Point: >100°C (212°F)

Melting Point: Not available.

Critical Temperature: Not available.

Specific Gravity: 1.11 (Water = 1)

Vapor Pressure: The highest known value is 2.3 kPa (@ 20°C) (Water).

Vapor Density: The highest known value is 0.62 (Air = 1) (Water).

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water.

Solubility: Easily soluble in cold water, hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents, metals, acids, alkalis.

Corrosivity: Corrosive in presence of glass.

Special Remarks on Reactivity: Incompatible with strong oxidants, particularly potassium chlorate and sodium nitrate.

Special Remarks on Corrosivity: Corrosive to glass and most metals

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Eye contact.

Toxicity to Animals:

LD50: Not available. LC50: Not available.

Chronic Effects on Humans: Contains material which may cause damage to the following organs: bones.

Other Toxic Effects on Humans:

Very hazardous in case of skin contact (irritant), of ingestion, . Hazardous in case of skin contact (corrosive). Slightly hazardous in case of eye contact (corrosive), of inhalation (lung sensitizer, lung corrosive).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans:

Acute and Chronic Potential Health Effects: Skin: Causes severe skin irritation and may cause hydrogen fluoride burns through prolonged exposure. Appearance of burns may be delayed for several hours. Lighter exposures to liquid, and mist exposures, may cause dermatitis Eyes: Solution or mist exposure may cause severe irritation. Prolonged direct contact with mist may cause hydrofluoric acid burns and severe corneal burns. Inhalation: Inhalation of mist or fumes may cause irritation. Some toxic effects may include chills, difficulty breathing, coughing, fever. Ingestion: May be fatal. Symptoms may be varied depending on the amount ingested. Ingestion of large amounts may cause gastroenteritis (which may be hemorrhagic), burns of the digestive tract, severe shock, vasomotor depression, cardiac disturbances. Other serious gastrointestinal effects may include hematemesis, nausea, and severe abdominal pain, painful necrotic lesions, local caustic effects to mouth and gastrointestinal tract. Less than 2.5 g taken by mouth may cause dangerous poisoning due to hypocalcemia. Chronic or prolonged exposure from inhalation or ingestion of fluoride vapors or mists may cause Fluorosis (chronic fluoride poisoning) and may also affect the blood serum composition, and kidneys. Fluorosis is characterized by weight loss, weakness, anemia, brittle bones, and stiff joints. Other musculoskeletal effects may include teeth discoloration or mottling, tendon calcification, and osteosclerosis, increased radiographic density of the bones..

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 6.1: Poisonous material.

Identification: : Ammonium Fluoride (Ammonium fluoride) UNNA: 2505 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:

Connecticut hazardous material survey.: Ammonium fluoride Illinois chemical safety act: Ammonium fluoride New York acutely hazardous substances: Ammonium fluoride Rhode Island RTK hazardous substances: Ammonium fluoride Pennsylvania RTK: Ammonium fluoride Massachusetts RTK: Ammonium fluoride Massachusetts spill list: Ammonium fluoride New Jersey: Ammonium fluoride New Jersey spill list: Ammonium fluoride Louisiana spill reporting: Ammonium fluoride TSCA 8(b) inventory: Water; Ammonium fluoride CERCLA: Hazardous substances.: Ammonium fluoride: 100 lbs. (45.36 kg);

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 0

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/09/2005 03:55 PM

Last Updated: 05/21/2013 12:00 PM

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall ScienceLab.com be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if ScienceLab.com has been advised of the possibility of such damages.