



Material Safety Data Sheet

ABF-37

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	

1. Product and Company Identification

Material name	ABF-37
Patent Number	Not available
Revision date	March-31-2011
Version No.	2
CAS #	Mixture
Manufacturer information	Clearwater™ International L.L.C. 100 Leetsdale Industrial Drive Leetsdale, PA 15056 US CHEMTREC 1-800-424-9300/703-527-3887
Emergency	CHEMTREC 1-800-424-9300/703-527-3887
Supplier information	Producers Service Corp. 109 South Graham St. Zanesville, OH 43701 US
Supplier emergency telephone number(s)	24hr customer Service 740-454-6253

2. Hazards Identification

Emergency overview	Causes skin and eye burns. This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Routes of exposure	Ingestion. Inhalation. Skin contact. Eye contact.
Eyes	This product causes eye burns. Risk of serious damage to eyes. Do not get this material in contact with eyes.
Skin	Causes skin burns. Do not get this material in contact with skin.
Inhalation	Causes burns. Do not breathe dust/fume/gas/mist/vapors/spray.
Ingestion	Toxic if swallowed. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract. Do not ingest.
Potential environmental effects	Components of this product are hazardous to aquatic life. May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Ammonium Bifluoride	1341-49-7	40 - 70



4. First Aid Measures

First aid procedures

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists.
Skin contact	Wash off with warm water and soap. Get medical attention if irritation develops or persists.
Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately.
Ingestion	If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting without medical advice.

Notes to physician In case of shortness of breath, give oxygen. Keep victim warm. Symptoms may be delayed.

General advice In case of shortness of breath, give oxygen. Keep victim warm. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Flammable properties Not a fire hazard. The product is not flammable.

Extinguishing media

Suitable extinguishing media Dry chemical, CO₂, water spray or regular foam.

Protection of firefighters

Protective equipment and precautions for firefighters Use water spray to cool unopened containers. Cool containers with flooding quantities of water until well after fire is out.

6. Accidental Release Measures

Personal precautions

Local authorities should be advised if significant spillages cannot be contained. Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering. Keep unnecessary personnel away. Stay upwind. Keep out of low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not contaminate water.

Methods for containment

Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up

Should not be released into the environment.

Large Spills: Dike far ahead of liquid spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. After removal flush contaminated area thoroughly with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean contaminated surface thoroughly.

Never return spills in original containers for re-use.



7. Handling and Storage

Handling	Use only with adequate ventilation. Avoid release to the environment. Do not get this material on clothing. Wash thoroughly after handling. Avoid prolonged exposure.
Storage	Store in a closed container away from incompatible materials. Store in accordance with local/regional/national/international regulation.

8. Exposure Controls / Personal Protection

Engineering controls	Ensure adequate ventilation, especially in confined areas.
Personal protective equipment	
Eye / face protection	Do not get this material in contact with eyes. Wear chemical goggles. Face-shield.
Skin protection	Do not get this material in contact with skin. Do not get this material on clothing. Wear chemical protective equipment that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent). Protective gloves. Impervious gloves. Structural firefighters protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.
Respiratory protection	Wear positive pressure self-contained breathing apparatus (SCBA).
General hygiene considerations	Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not get this material on clothing. When using do not eat or drink. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice. Wash hands after handling and before eating.

9. Physical & Chemical Properties

Appearance	Not available
Color	Not available
Odor	Not available
Odor threshold	Not available
Physical state	Liquid.
Form	Liquid.
pH	Not available
Melting point	32 °F (0 °C) estimated
Freezing point	Not available
Boiling point	147.2 °F (64.42 °C) estimated
Flash point	Not available
Evaporation rate	Not available
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available
Flammability limits in air, lower, % by volume	Not available
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	1.1768 estimated
Relative density	1.1767 g/cm ³ estimated



Solubility (water)	Not available
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Incompatible materials	Water.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Acute effects	Acute LD50: 365 mg/kg estimated, Rat, Oral Causes burns.
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Component analysis - LD50

Toxicology Data - Selected LD50s and LC50s

Ammonium Bifluoride 1341-49-7 Oral LD50 Rat: 130 mg/kg

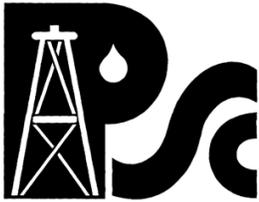
Chronic effects	Not expected to be hazardous by OSHA criteria.
Carcinogenicity	Not expected to be hazardous by OSHA criteria.
Neurological effects	Not expected to be hazardous by OSHA criteria.

12. Ecological Information

Ecotoxicity	Components of this product are hazardous to aquatic life.
Environmental effects	Harmful to aquatic life.

13. Disposal Considerations

Disposal instructions	Do not allow this material to drain into sewers/water supplies. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations.
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14. Transport Information

Department of Transportation (DOT) Requirements

Basic shipping requirements:

Proper shipping name	Ammonium hydrogendifluoride, solution
Hazard class	8
Subsidiary hazard class	6.1
UN number	UN2817
Packing group	II
Additional information:	
Special provisions	IB2, N34, T8, TP2, TP12, TP13
Packaging exceptions	154
Packaging non bulk	202
Packaging bulk	243
ERG number	154



Department of Transportation (DOT) Requirements

Bulk

Basic shipping requirements:

Proper shipping name	Ammonium hydrogendifluoride, solution
Hazard class	8
Subsidiary hazard class	6.1
UN number	UN2817
Packing group	II
Additional information:	
Special provisions	IB2, N34, T8, TP2, TP12, TP13
Packaging exceptions	154
Packaging non bulk	202
Packaging bulk	243
ERG number	154



Canadian Transportation of Dangerous Goods (TDG) Requirements

Basic shipping requirements:

Proper shipping name	AMMONIUM HYDROGENDIFLUORIDE SOLUTION
Hazard class	8
UN number	UN2817
Packing group	II
Additional information:	
ERG number	154





IMDG

Basic shipping requirements:

Proper shipping name	AMMONIUM HYDROGENDIFLUORIDE SOLUTION
Hazard class	8
Subsidiary hazard class	6.1
UN number	2817
Packing group	II



IATA

Basic shipping requirements:

Proper shipping name	Ammonium hydrogendifluoride solution
Hazard class	8
Subsidiary hazard class	6.1
UN number	2817
Packing group	II



15. Regulatory Information

Labelling

Contains Ammonium Bifluoride

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

CERCLA (Superfund) reportable quantity

Ammonium Bifluoride: 100.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes



Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

International regulations

Canada - WHMIS - Ingredient Disclosure List

Ammonium Bifluoride 1341-49-7 1 %

State regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

U.S. - Massachusetts - Right To Know List

Ammonium Bifluoride 1341-49-7 Present

U.S. - Minnesota - Hazardous Substance List

Ammonium Bifluoride 1341-49-7 Present

U.S. - New Jersey - Right to Know Hazardous Substance List

Ammonium Bifluoride 1341-49-7 sn 0089

U.S. - Pennsylvania - RTK (Right to Know) List

Ammonium Bifluoride 1341-49-7 Environmental hazard

16. Other Information

HMIS® ratings

Health: 3
Flammability: 0
Physical hazard: 0

NFPA ratings

Health: 2
Flammability: 0
Instability: 0

Prepared by

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Disclaimer

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Issue date

March-31-2011

MSDS sections updated

Product and Company Identification: Product and Company Identification
Transport Information: Product Shipping Name/Packing Group
Other Information: MSDS footer disclaimer