



SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Name of the substance**Identification number****Synonyms****Document number****Materion Code****Issue date****Version number****Revision date****Supersedes date**Ammonium Bifluoride (NH₄HF₂)

009-009-00-4 (Index number)

AMMONIUM BIFLUORIDE * AMMONIUM HYDROGEN DIFLUORIDE

1BB

1BB

02-October-2017

02

20-March-2018

02-October-2017

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Notavailable. **Uses advised****against** None known.

1.3. Details of the supplier of the safety data sheet

Supplier**Company name**Libyan Oil & Gas Integrated
Services-LOG.**Address**

Tripoli-Libya

Telephone e-mail+218919720049
sales@log-libya.com

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended Health hazards

Acute toxicity, oral

Category 3

H301 - Toxic if swallowed.

Skin corrosion/irritation

Category 1B

H301 - Toxic if swallowed.

H314 - Causes severe skin burns
and eye damage.**Hazard summary**

Toxic if swallowed. Toxic if swallowed. Causes severe skin burns and eye damage.

2.2. Label elements

www.alamsar-international.com
info@alamsar-international.com
+20 10 65564849

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Ammonium bifluoride



Hazard pictograms

Signal word

Danger

Hazard statements

H301
H301
H314

Toxic if swallowed.
Toxic if swallowed.
Causes severe skin burns and eye damage.

Precautionary statements
Prevention

P264
P270
P280

Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301 + P310
P301 + P330 + P331
P303 + P361 + P353
P304 + P340
P305 + P351 + P338
P321
P363

IF SWALLOWED: Immediately call a POISON CENTRE/doctor.
IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see this label).
Wash contaminated clothing before reuse.

Storage

P405

Store locked up.

Disposal

P501

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

Supplemental label information

None.
None known.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

General information

| Chemical name | No. | % | CAS-No. / EC REACH Registration No. | INDEX No. | Notes |
|---------------------|-----------|-----|-------------------------------------|--------------|-------|
| Ammonium bifluoride | | 100 | | | # |
| | 1341-49-7 | | - | 009-009-00-4 | |
| | 215-676-4 | | | | |

Classification: Acute Tox. 3;H301, Skin Corr. 1B;H314

List of abbreviations and symbols that may be used above

CLP: Regulation No. 1272/2008.
DSD: Directive 67/548/EEC. M: M-factor
vPvB: very persistent and very bioaccumulative substance.
PBT: persistent, bioaccumulative and toxic substance.
#: This substance has been assigned Community workplace exposure limit(s).

Composition comments The full text for all R- and H-phrases is displayed in section 16.

SECTION 4: First aid

measures

General information

In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

4.1. Description of first aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a physician or poison control centre immediately.

Skin contact

Take off immediately all contaminated clothing. Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control centre immediately. Chemical burns must be treated by a physician. For minor skin contact, avoid spreading material on unaffected skin. Wash contaminated clothing before reuse.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control centre immediately.

Ingestion

Call a physician or poison control centre immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

4.2. Most important symptoms and effects, both acute and delayed Corrosive effects. Burning pain and severe corrosive skin damage. Causes serious eye damage. Permanent eye damage including blindness could result.

4.3. Indication of any immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards

No unusual fire or explosion hazards noted.

5.1. Extinguishing media

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media

None known.

5.2. Special hazards arising from the substance or mixture

During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters

Special protective equipment for firefighters

Wear suitable protective equipment.

Special firefighting procedures

Use water spray to cool unopened containers.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Immediately evacuate personnel to safe areas. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillage cannot be contained. For personal protection, see section 8 of the SDS.

For emergency responders

Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

6.4. Reference to other sections

SECTION 7: Handling and storage

7.1. Precautions for safe handling Provide adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure.

Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities Store locked up. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

7.3. Specific end use(s) Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

| Material | Type | Value | Form |
|-------------------------------------|------|------------|---------------------|
| Ammonium bifluoride (CAS 1341-49-7) | MAK | 2,5 mg/m3 | Inhalable fraction. |
| | STEL | 12,5 mg/m3 | Inhalable |

fraction.

Belgium. Exposure Limit Values.

| Material | Type | Value |
|-------------------------------------|------|-----------|
| Ammonium bifluoride (CAS 1341-49-7) | TWA | 2,5 mg/m3 |

Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

| Material | Type | Value |
|----------|------|-------|
|----------|------|-------|

Ammonium bifluoride (CAS TWA
2,5 mg/m³)

1341-49-7)

Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

| Material | Type | Value |
|-------------------------------------|------|-----------------------|
| Ammonium bifluoride (CAS 1341-49-7) | MAC | 2,5 mg/m ³ |

Czech Republic. OELs. Government Decree 361

| Material | Type | Value |
|-------------------------------------|---------|-----------------------|
| Ammonium bifluoride (CAS 1341-49-7) | Ceiling | 5 mg/m ³ |
| | TWA | 2,5 mg/m ³ |

Denmark. Exposure Limit Values

| Material | Type | Value |
|-------------------------------------|------|-----------------------|
| Ammonium bifluoride (CAS 1341-49-7) | TLV | 2,5 mg/m ³ |

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)

| Material | Type | Value |
|-------------------------------------|------|-----------------------|
| Ammonium bifluoride (CAS 1341-49-7) | | 2,5 mg/m ³ |

Finland. Workplace Exposure Limits

| Material | Type | Value | France Threshold Values for |
|-------------------------------------|------|-----------------------|-----------------------------|
| Ammonium bifluoride (CAS 1341-49-7) | TWA | 2,5 mg/m ³ | |
| | TWA | 2,5 mg/m ³ | (VLEP) |

Occupational Exposure to Chemicals in France, INRS ED 984

| Material | Type | Value |
|-------------------------------------|------|-----------------------|
| Ammonium bifluoride (CAS 1341-49-7) | VME | 2,5 mg/m ³ |

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

| Material | Type | Value |
|-------------------------------------|------|-----------------------|
| Ammonium bifluoride (CAS 1341-49-7) | STEL | 10 mg/m ³ |
| | TWA | 2,5 mg/m ³ |

Iceland. OELs. Regulation 154/1999 on occupational exposure limits

| Material | Type | Value |
|-------------------------------------|------|-----------------------|
| Ammonium bifluoride (CAS 1341-49-7) | TWA | 0,6 mg/m ³ |

Latvia. OELs. Occupational exposure limit values of chemical substances in work environment

| Material | Type | Value |
|-------------------------------------|------|-----------------------|
| Ammonium bifluoride (CAS 1341-49-7) | STEL | 1 mg/m ³ |
| | TWA | 0,2 mg/m ³ |

Lithuania. OELs. Limit Values for Chemical Substances, General Requirements

| Material | Type | Value |
|-------------------------------------|------|-----------------------|
| Ammonium bifluoride (CAS 1341-49-7) | TWA | 2,5 mg/m ³ |

1341-49-7)

Luxembourg. Binding Occupational exposure limit values (Annex I), Memorial A

Material Type Value

| | | |
|-------------------------------------|-----|-----------|
| Ammonium bifluoride (CAS 1341-49-7) | TWA | 2,5 mg/m3 |
|-------------------------------------|-----|-----------|

Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V)

| Material | Type | Value |
|----------|------|-------|
|----------|------|-------|

| | | |
|-------------------------------------|-----|-----------|
| Ammonium bifluoride (CAS 1341-49-7) | TWA | 2,5 mg/m3 |
|-------------------------------------|-----|-----------|

Netherlands. OELs (binding)

| Material | Type | Value |
|----------|------|-------|
|----------|------|-------|

| | | |
|--------------------------|------|---------|
| Ammonium bifluoride (CAS | STEL | 2 mg/m3 |
|--------------------------|------|---------|

1341-49-7)

Norway. Administrative Norms for Contaminants in the Workplace

| Material | Type | Value |
|----------|------|-------|
|----------|------|-------|

| | | |
|-------------------------------------|-----|-----------|
| Ammonium bifluoride (CAS 1341-49-7) | TLV | 0,5 mg/m3 |
|-------------------------------------|-----|-----------|

Portugal. OELs. Decree-Law n. 290/2001 (Journal of the Republic - 1 Series A, n.266)

| Material | Type | Value |
|----------|------|-------|
|----------|------|-------|

| | | |
|-------------------------------------|-----|-----------|
| Ammonium bifluoride (CAS 1341-49-7) | TWA | 2,5 mg/m3 |
|-------------------------------------|-----|-----------|

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)

| Material | Type | Value |
|----------|------|-------|
|----------|------|-------|

| | | |
|-------------------------------------|-----|-----------|
| Ammonium bifluoride (CAS 1341-49-7) | TWA | 2,5 mg/m3 |
|-------------------------------------|-----|-----------|

Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

| Material | Type | Value |
|----------|------|-------|
|----------|------|-------|

| | | |
|-------------------------------------|-----|-----------|
| Ammonium bifluoride (CAS 1341-49-7) | TWA | 2,5 mg/m3 |
|-------------------------------------|-----|-----------|

| Material | Type | Value |
|----------|------|-------|
|----------|------|-------|

| | | |
|-------------------------------------|-----|-----------|
| Ammonium bifluoride (CAS 1341-49-7) | TWA | 2,5 mg/m3 |
|-------------------------------------|-----|-----------|

Spain. Occupational Exposure Limits

| Material | Type | Value |
|----------|------|-------|
|----------|------|-------|

chemical agents

Ammonium bifluoride (CAS 1341-49-7) TWA 2,5 mg/m³ **Sweden.**

OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7)

| Material | Type | Value |
|-------------------------------------|------|---------------------|
| Ammonium bifluoride (CAS 1341-49-7) | TWA | 2 mg/m ³ |

Switzerland. SUVA Grenzwerte am Arbeitsplatz

| Material | Type | Value | Form |
|-------------------------------------|------|---------------------|-----------------|
| Ammonium bifluoride (CAS 1341-49-7) | TWA | 4 mg/m ³ | Inhalable dust. |
| | | 1 mg/m ³ | Inhalable dust. |

UK. EH40 Workplace Exposure Limits (WELs)

| Material | Type | Value |
|-------------------------------------|------|-------|
| Ammonium bifluoride (CAS 1341-49-7) | TWA | |

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU

| Material | Type | Value |
|-------------------------------------|------|-----------------------|
| Ammonium bifluoride (CAS 1341-49-7) | TWA | 2,5 mg/m ³ |

Biological limit values

Croatia. BLV. Dangerous Substance Exposure Limit Values at Workplace, Annexes 4 (as amended)

| Material | Value | Determinant | Specimen | Sampling time |
|-------------------------------------|--------|-------------|---------------------|---------------|
| Ammonium bifluoride (CAS 1341-49-7) | 7 mg/g | Fluoride | Creatinine in urine | * |

Croatia. BLV. Dangerous Substance Exposure Limit Values at Workplace, Annexes 4 (as amended)

| Material | Value | Determinant | Specimen | Sampling time |
|----------|--------|-------------|-----------------|---------------|
| | 4 mg/g | Fluoride | Creatinine in u | * |

rine * - For sampling details, please see the source document.

Czech Republic. Limit Values for Indictators of Biological Exposure Tests in Urine and Blood, Annex 2, Tables 1 and 2, Government Decree 432/2003 Sb.

| Material | Value | Determinant | Specimen | Sampling time |
|-------------------------------------|--------------|-------------|---------------------|---------------|
| Ammonium bifluoride (CAS 1341-49-7) | 60 µmol/mmol | Fluoride | Creatinine in urine | * |
| | 10 mg/g | Fluoride | Creatinine in u | * |

rine * - For sampling details, please see the source document.

**France. Biological indicators of exposure (IBE)
(National Institute for Research and Security
(INRS, ND 2065)**

| Material | Value | Determinant | Specimen | Sampling time |
|-------------------------------------|---------|-------------|----------|---------------|
| Ammonium bifluoride (CAS 1341-49-7) | 3 mg/g | Fluorures | urine | * |
| | 10 mg/g | Fluorures | urine | * |

* - For sampling details, please see the source document.

Germany. TRGS 903, BAT List (Biological Limit Values)

| Material | Value | Determinant | Specimen | Sampling time |
|-------------------------------------|--------|-------------|----------|---------------|
| Ammonium bifluoride (CAS 1341-49-7) | 7 mg/g | Fluorid | urine | * |
| | 4 mg/g | Fluorid | urine | * |

* - For sampling details, please see the source document.

**Hungary. Chemical Safety at Workplace Ordinance Joint Decree No. 25/2000 (Annex 2):
Permissible limit values of biological exposure (effect) indices**

| Material | Value | Determinant | Specimen | Sampling time |
|-------------------------------------|--------------|-------------|----------|---------------|
| Ammonium bifluoride (CAS 1341-49-7) | 7 mg/g | fluoride | urine | * |
| | 4 mg/g | fluoride | urine | * |
| | 42 µmol/mmol | fluoride | urine | * |
| | 24 µmol/mmol | fluoride | urine | * |

* - For sampling details, please see the source document.

**Slovakia. BLVs (Biological Limit Value). Regulation no. 355/2006 concerning protection of workers
exposed to chemical agents, Annex 2**

| Material | Value | Determinant | Specimen | Sampling time |
|-------------------------------------|--------|-------------|----------|---------------|
| Ammonium bifluoride (CAS 1341-49-7) | 7 mg/g | Fluorides | urine | * |
| | 4 mg/g | Fluorides | urine | * |

* - For sampling details, please see the source document.

Spain. Biological Limit Values (VLBs), Occupational Exposure Limits for Chemical Agents, Table 4

| Material | Value | Determinant | Specimen | Sampling time |
|-------------------------------------|--------|-------------|----------|---------------|
| Ammonium bifluoride (CAS 1341-49-7) | 3 mg/l | Fluoruros | Urine | * |
| | 2 mg/l | Fluoruros | Urine | * |

* - For sampling details, please see the source document.

Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)

| Material | Value | Determinant | Specimen | Sampling time |
|----------|-------|-------------|----------|---------------|
|----------|-------|-------------|----------|---------------|

Recommended monitoring procedures

Follow standard monitoring procedures.

Derived no effect levels (DNELs)

Not available.

Predicted no effect concentrations (PNECs)
8.2. Exposure controls

Not available.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

General information

Wear chemical protective equipment that is specifically recommended by the manufacturer. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection

Wear eye/face protection. Wear safety glasses with side shields (or goggles) and a face shield. Face shield is recommended.

Skin protection

- Hand protection

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

- Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. It may provide little or no thermal protection. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Respiratory protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

Hygiene measures

Do not get in eyes. Do not get this material in contact with skin. Do not get this material on clothing. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Environmental manager must be informed of all major releases.

Environmental exposure controls

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state

Solid.

Form

Solid.

Colour

Not available.

Odour

Not available.

Odour threshold

Not available.

pH

3,5 5% solution

Melting point/freezing point

125,6 °C (258,08°F)

| | |
|---|--------------------------|
| Initial boiling point and boiling range | 240 °C (464 °F) |
| Flash point | Not available. |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Not available. |
| Upper/lower flammability or explosive limits | |
| Flammability limit - lower | Not available. |
| (%) | |
| Flammability limit upper | Not available. |
| (%) | < 0,0000001 kPa at 25 °C |
| Vapour pressure | Not available. |
| Vapour density | Not available. |
| Relative density | Not available. |
| Solubility(ies) | |
| Solubility (water) | Not available. |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Not explosive. |
| Decomposition temperature | Not oxidising. |

Viscosity

Explosive properties

Oxidising properties

9.2. Other information

| | |
|--------------------------|----------------------------------|
| Density | 1,50 g/cm ³ estimated |
| Molecular formula | F2-H5-N |
| Molecular weight | 57,05 g/mol |
| Specific gravity | 1,5 |

SECTION 10: Stability and reactivity

| | |
|---|---|
| 10.1. Reactivity | Not available. |
| 10.2. Chemical stability | Material is stable under normal conditions. |
| 10.3. Possibility of hazardous reactions | No dangerous reaction known under conditions of normal use. Contact with incompatible materials. |
| 10.4. Conditions to avoid | None known. |
| 10.5. Incompatible materials | No hazardous decomposition products are known. |

10.6. Hazardous decomposition products

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

| | |
|---------------------|--|
| Inhalation | May cause irritation to the respiratory system. Prolonged inhalation may be harmful. |
| Skin contact | Causes severe skin burns. |
| Eye contact | Causes severe eye burns. |

Ingestion Toxic if swallowed. Causes digestive tract burns.
Symptoms Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

11.1. Information on toxicological effects

Acute toxicity Toxic if swallowed. Causes severe skin burns and eye damage. Toxic if swallowed.
Skin corrosion/irritation Causes severe skin burns and eye damage.
Serious eye damage/eye irritation Causes severe eye burns.
 Due to partial or complete lack of data the classification is not possible. Due to partial or complete lack of data the classification is not possible.
Respiratory sensitisation Due to partial or complete lack of data the classification is not possible.
Skin sensitisation Due to partial or complete lack of data the classification is not possible.
Germ cell mutagenicity Due to partial or complete lack of data the classification is not possible.
Carcinogenicity

Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)

Not listed.

IARC Monographs. Overall Evaluation of Carcinogenicity

Ammonium bifluoride (CAS 1341-49-7) 3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity Due to partial or complete lack of data the classification is not possible. **Specific target organ toxicity** Due to partial or complete lack of data the classification is not possible. - **single exposure**

Specific target organ toxicity Due to partial or complete lack of data the classification is not possible. - **repeated exposure**

Aspiration hazard Due to partial or complete lack of data the classification is not possible. **Mixture versus substance** No information available. **information**

Other information Not available.

SECTION 12: Ecological information

12.1. Toxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
12.2. Persistence and degradability
12.3. Bioaccumulative potential No data is available on the degradability of this product.
 No data available. Not available. Not available.
Partition coefficient n-octanol/water (log Kow) No data available.
 Not available.
Bioconcentration factor (BCF)
12.4. Mobility in soil
12.5. Results of PBT and vPvB assessment
12.6. Other adverse effects
12.7. Additional information No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

Estonia Dangerous substances in groundwater Data

Ammonium bifluoride (CAS 1341-49-7) Fluoride
(as F-ion, total) 1500 UG/L

Fluoride (as F-ion, total) 4000 UG/L

Estonia Dangerous substances in soil Data

Ammonium bifluoride (CAS 1341-49-7) Fluoride
(as F-ion) 1200 mg/kg

Fluoride (as F-ion) 2000 mg/kg

Fluoride (as F-ion) 450 mg/kg

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

EU waste code

The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Disposal methods/information

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Special precautions

Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

- 14.1. UN number** UN1727
- 14.2. UN proper shipping name** Ammonium hydrogendifluoride, solid
- 14.3. Transport hazard class(es)**
 - Class** 8
 - Subsidiary risk** -
 - Label(s)** 8
 - Hazard No. (ADR)** Not available.
 - Tunnel restriction** Not available.

code

14.4. Packing group II **14.5. Environmental No.**

14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

RID

- 14.1. UN number** UN1727
- 14.2. UN proper shipping name** AMMONIUM HYDROGENDIFLUORIDE, SOLID
- 14.3. Transport hazard class(es)**
 - Class** 8

Subsidiary risk -

Label(s) 8

14.4. Packing group
No.

II 14.5. Environmental

hazards 14.6. Special precautions Read safety instructions, SDS and emergency procedures before handling.
for user

ADN

14.1. UN number UN1727

14.2. UN proper shipping name Ammonium hydrogendifluoride, solid

14.3. Transport hazard class(es)
Class 8

Subsidiary risk -

Label(s) 8

14.4. Packing group II **14.5. Environmental** No.

hazards 14.6. Special precautions Read safety instructions, SDS and emergency procedures before handling.
for user

IATA

14.1. UN number UN1727

14.2. UN proper shipping name Ammonium hydrogendifluoride, solid

14.3. Transport hazard class(es)
Class 8

Subsidiary risk -

14.4. Packing group II **14.5. Environmental** No.

hazards

ERG Code 8L

14.6. Special precautions Read safety instructions, SDS and emergency procedures before handling.

for user

Other information

Passenger and cargo Allowed with restrictions.

aircraft

Cargo aircraft only Allowed with restrictions.

IMDG

14.1. UN number UN1727

14.2. UN proper shipping name AMMONIUM HYDROGENDIFLUORIDE, SOLID

14.3. Transport hazard class(es)

Class 8

Subsidiary

risk group 14.4. Packing II

14.5. Environmental hazards

Marine pollutant No.

EmS F-A, S-B

14.6. Special precautions before handling. for user Read safety instructions, SDS and emergency procedures

ADN; ADR; IATA; IMDG; RID



SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

**Other regulations
National regulations**

The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006. Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work. Follow national regulation for work with chemical agents.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

Not available.

Information on evaluation

Method applicable.

leading to the classification of mixture

Disclaimer

LOG cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. This document has been prepared using data from sources considered to be technically reliable and the information is believed to be correct. LOG makes no warranties, expressed or implied, as to the accuracy of the information contained herein. LOG cannot anticipate all conditions under which this information and its products may be used and the actual conditions of use are beyond its control. The user is responsible to evaluate all available information when using this product for any particular use and to comply with all Federal, State, Provincial and Local laws, statutes and regulations.