

Ammonium fluoride

30101-100G

Version 1.2

Revision Date 14.07.2022

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

1.1. Product identifier

Product name : Ammonium fluoride
SDS-number : 000000020931
Type of product : Substance
Remarks : SDS according to Art. 31 of Regulation (EC) 1907/2006.
Chemical name : ammonium fluoride
Index-No. : 009-006-00-8
REACH Registration Number : no data available

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

Use of the Substance/Mixture : Laboratory chemicals
Uses advised against : none

1.3. Details of the supplier of the safety data sheet

Company	: Honeywell International Inc. 115 Tabor Road 07950-2546 Morris Plains USA	Honeywell International, Inc. 115 Tabor Road Morris Plains, NJ 07950-2546 USA
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Telephone :
For further information, please contact: : SafetyDataSheet@Honeywell.com

1.4. Emergency telephone number

Emergency telephone number : +1-703-527-3887 (ChemTrec-Transport)
+1-303-389-1414 (Medical)
Country based Poison : see chapter 15.1

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Control Center

SECTION 2: Hazards identification


2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Acute toxicity Category 3 - Oral
H301 Toxic if swallowed.
Acute toxicity Category 3 - Inhalation
H331 Toxic if inhaled.
Acute toxicity Category 3 - Dermal
H311 Toxic in contact with skin.
Serious eye damage Category 1
H318 Causes serious eye damage.

2.2. Label elements

REGULATION (EC) No 1272/2008

Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled. H318 Causes serious eye damage.
Precautionary statements	:	P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P284 In case of inadequate ventilation wear respiratory protection. P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P302 + P352 IF ON SKIN: Wash with plenty of water. P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

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P308 + P313

lenses, if present and easy to do.
Continue rinsing.
IF exposed or concerned: Get medical
advice/ attention.

2.3. Other hazards

May cause hypocalcemia (depletion of calcium in the body) which may be fatal. Results of PBT and vPvB assessment, see chapter 12.5.

SECTION 3: Composition/information on ingredients

3.1. Substance

Chemical name	CAS-No. Index-No. REACH Registration Number EC-No.	Classification 1272/2008	Concentration	Remarks
ammonium fluoride	12125-01-8 009-006-00-8 235-185-9	Acute Tox. 3; H301; Oral Acute Tox. 3; H331; Inhalation Acute Tox. 3; H311; Dermal Eye Dam. 1; H318	100 %	

3.2. Mixture

Not applicable

Occupational Exposure Limit(s), if available, are listed in Section 8.
For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice:

First aider needs to protect himself. Take off all contaminated clothing immediately. Victim to lie down in the recovery position, cover and keep him warm. Call a physician immediately.

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Inhalation:

Remove to fresh air. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician.

Skin contact:

Wash off immediately with plenty of water. First treatment with calcium gluconate paste. Take off all contaminated clothing immediately. Call a physician immediately.

Eye contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Protect unharmed eye. Call a physician immediately.

Ingestion:

A person suspected to have swallowed the substance who is conscious should be given water to drink. Take to a doctor immediately together with this card

4.2. Most important symptoms and effects, both acute and delayed

No data available

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

See Section 11 for more detailed information on health effects and symptoms.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water spray
Foam
Carbon dioxide (CO₂)
Dry powder

Extinguishing media which shall not be used for safety reasons:

High volume water jet

5.2. Special hazards arising from the substance or mixture

Some risk may be expected of corrosive and toxic decomposition products.

Fire may cause evolution of:

Ammonia
Hydrogen fluoride
nitrogen oxides

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

No unprotected exposed skin areas.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. The product itself does not burn. Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Wear personal protective equipment. Unprotected persons must be kept away. Keep people away from and upwind of spill/leak.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Discharge into the environment must be avoided. Do not flush into surface water or sanitary sewer system. Do not allow run-off from fire fighting to enter drains or water courses.

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6.3. Methods and materials for containment and cleaning up

Use mechanical handling equipment.
Pick for disposal in tightly closed containers
Clean contaminated surface thoroughly.
Personal protection through wearing a tightly closed chemical protection suit and a self-contained breathing apparatus.

6.4. Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:

Exhaust ventilation at the object is necessary. Vent waste air to atmosphere only through suitable separators. Plan first aid action before beginning work with this product. Always have on hand a first-aid kit, together with proper instructions. Wear personal protective equipment.

Advice on protection against fire and explosion:

Normal measures for preventive fire protection.

Hygiene measures:

Take off all contaminated clothing immediately. Remove and wash contaminated clothing before re-use. Keep working clothes separately. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and at the end of workday. When using do not eat or drink.

7.2. Conditions for safe storage, including any incompatibilities

Further information on storage conditions:

Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Do not leave vessels/containers open Store in a place accessible by authorized persons only.

Advice on common storage:

Do not store together with: Acids

7.3. Specific end use(s)

no additional data available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:

Components	Basis / Value type	Value / Form of exposure	Exceeding Factor	Remarks
ammonium fluoride	EH40 WEL TWA	2,5 mg/m3 as F		
ammonium fluoride	EU ELV TWA	2,5 mg/m3		Indicative

TWA - Time weighted average

DNEL/ PNEC-Values

Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks
ammonium fluoride	Workers / Acute systemic effects		0,36mg/kg bw/day	Skin contact	
ammonium fluoride	Workers / Acute systemic effects		2,5 mg/m3	Inhalation	
ammonium fluoride	Workers / Long-term systemic effects		0,36mg/kg bw/day	Skin contact	
ammonium fluoride	Workers / Long-term systemic effects		2,5 mg/m3	Inhalation	
ammonium fluoride	Workers / Long-term local effects		2,5 mg/m3	Inhalation	

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Component	Environmental compartment / Value	Remarks
ammonium fluoride	Sewage treatment plant: 51 mg/l	
ammonium fluoride	Fresh water: 0,89 mg/l	
ammonium fluoride	Soil: 0,12 mg/kg	

8.2. Exposure controls

Occupational exposure controls

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.
Avoid dust formation.

Engineering measures

Emergency sprinkling nozzle
Local exhaust

Personal protective equipment

Respiratory protection:

In the case of dust or aerosol formation use respirator with an approved filter.

Hand protection:

Glove material: Natural Latex
Break through time: > 480 min
Glove thickness: 0,6 mm
Lapren®706
Gloves must be inspected prior to use.
Replace when worn.

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Remarks: Supplementary note: The specifications are based on information and tests from similar substances by analogy.
Due to varying conditions (e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.
Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer recommends to use the chemical protective glove in practice not longer than 50% of the recommended permeation time.
Manufacturer's directions for use should be observed because of great diversity of types .
Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

Eye protection:
Safety goggles

Skin and body protection:
Wear suitable protective equipment.
Wear as appropriate:
Protective suit

Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	solid
Colour	:	colourless
Odour	:	odourless
molecular weight	:	37,0 g/mol
Melting point/range	:	100 °C Decomposes before melting.
Boiling point/boiling range	:	No data available
Flammability	:	The product is not flammable.

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Upper explosion limit	:	Not applicable
Lower explosion limit	:	Not applicable
Flash point	:	Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	No decomposition if used as directed.
pH	:	ca. 6 at 20 °C
Auto-ignition temperature	:	not auto-flammable
Viscosity, kinematic	:	Not applicable
Water solubility	:	455 g/l at 25 °C
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	No data available
Density	:	ca. 1,01 g/cm ³ at 20 °C
Bulk density	:	ca. 660 kg/m ³
Relative vapour density	:	No data available

9.2 Other Information

Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Evaporation rate	:	No data available
Viscosity, dynamic	:	Not applicable

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SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under recommended storage conditions.

10.2. Chemical stability

No decomposition if used as directed.

10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Protect from moisture.

10.5. Incompatible materials

Glass and silicate-containing materials are attacked.
Contact with strong acids liberates hydrogen fluoride.
Reactions with strong alkalies.

10.6. Hazardous decomposition products

In case of fire hazardous decomposition products may be produced such as:

Ammonia
Hydrogen fluoride
nitrogen oxides

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:

LD50

Species: Rat

Value: > 200 - < 2.000 mg/kg

Classification based on Annex VI of regulation 1272/2008/EC.

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Acute dermal toxicity:

Classification based on Annex VI of regulation 1272/2008/EC.

Acute inhalation toxicity:

Classification based on Annex VI of regulation 1272/2008/EC.

Skin irritation:

Species: Rabbit

Result: slight irritation

Test substance: REACH dossier "read-across"

According to the classification criteria of the European Union, the product is not considered as being a skin irritant.

Eye irritation:

Species: Rabbit

Result: Risk of serious damage to eyes.

Classification: Risk of serious damage to eyes.

Test substance: REACH dossier "read-across"

Respiratory or skin sensitisation:

Buehler Test

Species: Guinea pig

Result: non-sensitizing

Test substance: REACH dossier "read-across"

Repeated dose toxicity:

Note: Not classified due to data which are conclusive although insufficient for classification.

Carcinogenicity:

Note: Not classified due to data which are conclusive although insufficient for classification.

Germ cell mutagenicity:

Test Method: In vitro gene mutation study in mammalian cells

Cell type: Chinese Hamster Ovary Cells

Metabolic activation: without metabolic activation

Result: negative

Test substance: REACH dossier "read-across"

Test Method: Ames test

Metabolic activation: with and without metabolic activation

Result: negative

Test substance: REACH dossier "read-across"

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Reproductive toxicity:

Remarks: Not classified due to data which are conclusive although insufficient for classification.

Aspiration hazard:

No data available

11.2. Information on other hazards

Endocrine disrupting properties

No data available

Other information:

Chronic Health Hazard

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish:

LC50

semi-static test

Species: Cyprinus carpio (Carp)

Value: 209 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Test substance: REACH dossier "read-across"

Toxicity to aquatic plants:

Not classified due to data which are conclusive although insufficient for classification.

Toxicity to aquatic invertebrates:

EC50

static test

Species: Daphnia magna (Water flea)

Value: 101 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Test substance: REACH dossier "read-across"

12.2. Persistence and degradability

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Biodegradability:

The methods for determining biodegradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

Not applicable

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:

Dispose according to legal requirements.

Packaging:

Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

Further information:

Provisions relating to waste:
EC Directive 2006/12/EC; 2008/98/EEC
Regulation No. 1013/2006

For personal protection see section 8.

SECTION 14: Transport information

14.1 UN number

ADR/RID:2505

IMDG:2505

IATA:2505

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14.2 UN proper shipping name

ADR/RID:AMMONIUM FLUORIDE

IMDG:AMMONIUM FLUORIDE

IATA:Ammonium fluoride

14.3 Transport hazard class(es)

ADR/RID: 6.1

IMDG: 6.1

IATA: 6.1

14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

14.5 Environmental hazards

ADR/RID:no

Marine pollutant: no

14.6 Special precautions for user

IMDG Code segregation group (SGG2) - Ammonium compounds,IMDG Code segregation group (SG35) - Separate from acids (SGG1)

14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15: Regulatory information

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

Basis	Value	Remarks
Substances of very high concern (SVHC)		This product does not contain substances of very high concern according to Regulation (EC) No Article 57 above the respective regulatory 1907/2006 (REACH), concentration limit of $\geq 0.1\%$ (w/w).
Directive 2012/18/EC SEVESO III Listed in Regulation : H2: ACUTE TOXIC	Quantity: 50.000 kg Quantity: 200.000 kg	

Poison Control Center

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Country	Phone Number
Austria	+4314064343
Belgium	070 245245
Bulgaria	(+35929154233
Croatia	(+3851)23-48-342
Cyprus	+357 2240 5611
Czech Republic	+420224919293; +420224915402
Denmark	82121212
Estonia	16662; (+372)6269390
Finland	9471977
France	+33(0)145425959
Greece	+30 210 779 3777
Hungary	(+36-80)201-199
Iceland	5432222
Ireland	+353(1)8092166
Italy	0382 24444
Germany	Berlin : 030/19240
	Bonn : 0228/19240
	Erfurt : 0361/730730
	Freiburg : 0761/19240
	Göttingen : 0551/19240
	Homburg : 06841/19240
	Mainz : 06131/19240
Munich : 089/19240	
Latvia	+37167042473

Country	Phone Number
Liechtenstein	+41 442515151
Lithuania	+370532362052
Luxembourg	070245245; (+352)80002-5500
Malta	+356 2395 2000
Netherlands	030-2748888
Norway	22591300
Poland	+48 42 25 38 400
Portugal	800250250
Romania	+40 21 318 3606
Slovakia (NTIC)	+421 2 54 774 166
Slovenia	+386 1 400 6051
Spain	+34915620420
Sweden	112 (begär Giftinformation);+46104566786
Switzerland	145
United Kingdom	(+44) 844 892 0111

Other inventory information

US. Toxic Substances Control Act
 On TSCA Inventory

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Australia. Industrial Chemicals Act (AIC), as amended
On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)
All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List
On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)
On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand
On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI)
On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

Text of H-statements referred to under heading 3

ammonium fluoride : H301 Toxic if swallowed.
H331 Toxic if inhaled.
H311 Toxic in contact with skin.
H318 Causes serious eye damage.

Further information

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All directives and regulations refer to amended versions.
Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:

EC European Community
CAS Chemical Abstracts Service
DNEL Derived no effect level
PNEC Predicted no effect level
vPvB Very persistent and very bioaccumulative substance
PBT Persistent, bioaccumulative und toxic substance

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user.

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