



Be Right™

SAFETY DATA SHEET

Issue Date 28-04-2017

Revision Date 09-May-2023

Version 1.8

Section 1: Identification

Product identifier

Product Name Ammonium Fluoride Solution 30%
Product Code(s) 2305726

Other means of identification

Safety data sheet number M00694

Recommended use of the chemical and restrictions on use

Recommended Use Water Analysis. Bleaching agent for aluminum in brine test.

Uses advised against No information available

Details of manufacturer or importer

Supplier

HACH Pacific, 26 Brindley Street, Dandenong South, VIC 3175, Australia, Tel: 1300 887 735

Manufacturer

Hach Company, P.O. Box 389, Loveland, CO 80539, USA, +1(970) 669-3050

Emergency telephone number

13 11 26

Section 2: Hazard(s) identification

GHS Classification

Acute toxicity - Oral	Category 4 - (H302)
Acute toxicity - Dermal	Category 3 - (H311)
Acute toxicity - Inhalation (Dusts/Mists)	Category 4 - (H332)
Serious eye damage/eye irritation	Category 1 - (H318)
Specific target organ toxicity (single exposure)	Category 3 - (H335)
Specific target organ toxicity (repeated exposure)	Category 2 - (H373)
Chronic aquatic toxicity	Category 3 - (H412)

Label elements

Skull and crossbones
Health hazard
Corrosion



Signal word - DANGER

Hazard statements

H302 - Harmful if swallowed

H311 - Toxic in contact with skin

H318 - Causes serious eye damage

H332 - Harmful if inhaled

H335 - May cause respiratory irritation

H373 - May cause damage to organs through prolonged or repeated exposure

H412 - Harmful to aquatic life with long lasting effects

Precautionary statements

P270 - Do not eat, drink or smoke when using this product

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

P330 - Rinse mouth

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

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P361 + P364 - Take off immediately all contaminated clothing and wash it before reuse

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 lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor/physician

P271 - Use only outdoors or in a well-ventilated area

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

P405 - Store locked up

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P273 - Avoid release to the environment

P501 - Dispose of contents/ container to an approved waste disposal plant

Other hazards which do not result in classification

Harmful to aquatic life

None known

Section 3: Composition and information on ingredients

Substance

Not applicable

Mixture

Section 4: First aid measures

Emergency telephone number

Poisons Information Center, Australia: 13 11 26
Poisons Information Center, New Zealand: 0800 764 766

Description of necessary first aid measures

General advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Inhalation	Remove to fresh air. Get medical attention immediately if symptoms occur. IF exposed or concerned: Get medical advice/attention.
Skin contact	Get immediate medical attention. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Eye contact	Get immediate medical attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention.

For emergency responders

Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Wear personal protective clothing (see section 8). Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid contact with skin, eyes or clothing.
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Most important symptoms/effects, acute and delayed

Symptoms	Burning sensation.
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Indication of immediate medical attention and special treatment needed, if necessary

Note to physicians	Treat symptomatically.
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Section 5: Firefighting measures

Extinguishing media

Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	No information available

Specific hazards arising from the chemical

No information available.

Flammable properties

During a fire, irritating and highly toxic gases may be generated by thermal decomposition.

Explosive properties

Not classified according to GHS criteria.

Hazardous combustion products	This material will not burn.
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Specific/special fire-fighting measures

No information available.

Special protective equipment and precautions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas.

Other Information Use personal protective equipment as required. Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up

Methods for containment Keep out of drains, sewers, ditches and waterways.

Methods for cleaning up Use personal protective equipment as required. Place in appropriate chemical waste container.

Precautions to prevent secondary hazards

Clean contaminated objects and areas thoroughly observing environmental regulations. See section 8 for more information. See section 13 for more information.

Section 7: Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Take off contaminated clothing and wash before reuse. Do not eat, drink or smoke when using this product. Avoid breathing vapors or mists. In case of insufficient ventilation, wear suitable respiratory equipment.

Precautions for safe handling

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up. Accessible only for authorized persons.

Incompatible materials Strong acids. Strong bases. Strong oxidizing agents.

Section 8: Exposure controls and personal protection

Control parameters

Exposure Limits

Biological occupational exposure limits

Legend See section 16 for terms and abbreviations

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hand protection Wear suitable gloves. Impervious gloves. Barrier creams may help to protect the exposed areas of skin. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374-1:2016.

Eye/face protection Tight sealing safety goggles.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Wash contaminated clothing before reuse.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

Environmental exposure controls Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.

Thermal hazards None under normal processing.

Section 9: Physical and chemical properties**Information on basic physical and chemical properties**

Physical state	Liquid	Color	colorless
Appearance	aqueous solution	Odor threshold	No data available
Odor	Odorless		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Molecular weight	No data available	
pH	7.3	@ 20 °C
Melting point/freezing point	~ -43 °C / -45.4 °F	
Initial boiling point and boiling range	92 °C / 197.6 °F	
Evaporation rate	0.8 (water = 1)	
Vapor pressure	19.652 mm Hg / 2.62 kPa at 25 °C / 77 °F	
Relative vapor density	0.62	
Specific gravity - VALUE 1	1.35	
Partition Coefficient (n-octanol/water)	Not applicable	

Soil Organic Carbon-Water Partition Coefficient	Not applicable
Autoignition temperature	No data available
Decomposition temperature	No data available
Dynamic viscosity	No data available
Kinematic viscosity	No data available

Solubility(ies)**Water solubility**

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
Soluble	> 1000 mg/L	25 °C / 77 °F

Solubility in other solvents

<u>Acid</u>	<u>Solubility</u>	<u>> 1000 mg/L</u>	<u>25 °C / 77 °F</u>
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F

Other information**Metal Corrosivity**

Steel Corrosion Rate	No data available
Aluminum Corrosion Rate	< 2.54 mm/yr / < 0.1 in/yr

Volatile Organic Compounds (VOC) Content**Explosive properties**

Upper explosion limit	No data available
Lower explosion limit	No data available

Flammable properties

Flash point	No data available
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Flammability Limit in Air

Upper flammability limit:	No data available
Lower flammability limit:	No data available

Oxidizing properties

No data available.

Bulk density

No data available

Section 10: Stability and reactivity

Reactivity

Not applicable.

Chemical stability

Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Possibility of hazardous reactions

None under normal processing.

Hazardous polymerization

None under normal processing.

Conditions to avoid

None known based on information supplied.

Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents.

Hazardous decomposition products

Hydrogen fluoride. Ammonia. Nitrogen oxides.

Section 11: Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	May cause irritation of respiratory tract.
Eye contact	Severely irritating to eyes. Causes serious eye damage. May cause burns. May cause irreversible damage to eyes.
Skin contact	May cause irritation. Toxic in contact with skin.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed.

Symptoms Redness. Burning. May cause blindness.

Acute toxicity

Based on available data, the classification criteria are not met

Mixture

No data available.

Ingredient Acute Toxicity Data

No data available.

Unknown acute toxicity

0 % of the mixture consists of ingredient(s) of unknown toxicity.

- 0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

Acute Toxicity Estimations (ATE)

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	667.00 mg/kg
ATEmix (dermal)	1,000.00 mg/kg
ATEmix (inhalation-dust/mist)	3.00 mg/L

Skin corrosion/irritation

May cause skin irritation.

Mixture

No data available.

Ingredient Skin Corrosion/Irritation Data

No data available.

Serious eye damage/eye irritation

Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.

Mixture

No data available.

Ingredient Eye Damage/Eye Irritation Data

No data available.

Respiratory or skin sensitization

Based on available data, the classification criteria are not met.

Mixture

No data available.

Ingredient Sensitization Data

No data available.

STOT - single exposure

May cause respiratory irritation.

Mixture

No data available.

Ingredient Specific Target Organ Toxicity Single Exposure Data

No data available.

STOT - repeated exposure

May cause damage to organs.

Mixture

No data available.

Ingredient Specific Target Organ Toxicity Repeat Exposure Data

No data available.

Carcinogenicity**Mixture**

No data available.

Ingredient Carcinogenicity Data

No data available.

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)	Does not apply
IARC (International Agency for Research on Cancer)	Group 3 - Not classifiable as a human carcinogen
NTP (National Toxicology Program)	Does not apply
OSHA	Does not apply

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Mixture invitro Data

No data available.

Substance invitro Data

No data available.

Mixture invivo Data

No data available.

Substance invivo Data

No data available.

Reproductive toxicity

Based on available data, the classification criteria are not met.

Mixture

No data available.

Ingredient Reproductive Toxicity Data

No data available.

Section 12: Ecological information

Aquatic ecotoxicity

Harmful to aquatic life with long lasting effects.

Unknown aquatic toxicity

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Mixture**Aquatic Acute Toxicity**

No data available.

Aquatic Chronic Toxicity

No data available.

Substance**Aquatic Acute Toxicity**

No data available.

Aquatic Chronic Toxicity

No data available.

Persistence and degradability**Mixture**

No data available.

Bioaccumulation

MATERIAL DOES NOT BIOACCUMULATE.

Mixture

No data available.

Partition Coefficient (n-octanol/water)

Not applicable

Mobility**Soil Organic Carbon-Water Partition Coefficient**

Not applicable

Other adverse effects

No information available

Section 13: Disposal considerations**Waste treatment methods**

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

See section 8 for more information

Section 14: Transport information**ADG**

UN number or ID number UN3287
Proper shipping name Toxic Liquid, Inorganic, N.O.S.
Transport hazard class(es) 6.1
Packing group III

IATA

UN number or ID number UN3287
Proper shipping name Toxic Liquid, Inorganic, N.O.S.
Transport hazard class(es) 6.1
Packing group III

IMDG

UN number or ID number UN3287
Proper shipping name Toxic Liquid, Inorganic, N.O.S.
Transport hazard class(es) 6.1
Packing Group III

Additional information

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods.

If the item is not in a reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

Section 15: Regulatory information**Regulatory information****National regulations****Australia**

See section 8 for national exposure control parameters

Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)

Classified as a scheduled poison according to the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)

Poison Schedule Number 6

Australian Industrial Chemicals Introduction Scheme (AICIS)

Illicit Drug Precursors/Reagents

This product does not contain any substance(s) on the Illicit Drug Precursors/Reagents list.

National pollutant inventory

Subject to reporting requirement

International Inventories

AICS	Complies.
NZIoC	-.
TSCA	Complies.
DSL/NDL	Complies.
EINECS/ELINCS	Complies.
ENCS	Complies.
IECSC	Complies.
KECL - Existing substances	Complies.
PICCS	Complies.

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

Section 16: Other information

Prepared By Hach Product Compliance Department

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Revision Note

None

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Ceiling Limit Value	MAC	Maximum Allowable Concentration
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed

in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.

SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR	ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS	CCRIS (Chemical Carcinogenesis Research Information System)
CDC	CDC (Center for Disease Control)
CEPA	CEPA (Canadian Environmental Protection Agency)
CICAD	CICAD (Concise International Chemical Assessment Documents)
ECHA	ECHA (The European Chemicals Agency)
EEA	EEA (European Environment Agency)
EPA	EPA (Environmental Protection Agency)
ERMA	ERMA (New Zealand's Environmental Risk Management Authority)
ECOSARS	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
FDA	FDA (Food & Drug Administration)
GESTIS	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
HSDB	HSDB (Hazardous Substances Data Bank)
INERIS	INERIS (The National Industrial Environment and Risks Institute)
IPCS INCHEM	IPCS INCHEM (International Programme on Chemical Safety)
IUCLID	IUCLID (The International Uniform Chemical Information Database)
NITE	Japan National Institute of Technology and Evaluation (NITE)
NIH	NIH (National Institutes of Health)
NIOSH	NIOSH (National Institute for Occupational Safety and Health)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
NDF	no data
NICNAS	Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH IDLH	Immediately Dangerous to Life or Health
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEEN	PEEN (Pan European Ecological Network)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
SIDS	SIDS (Screening Information Dataset) for High Volume Chemicals
SYKE	The Finnish Environment Institute (SYKE)
USDA	USDA (United States Department of Agriculture)
USDC	USDC (United States Department of Commerce)
WHO	WHO (World Health Organization)

Disclaimer

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

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End of Safety Data Sheet