Infosafe No™	1CH7L	Issue Date : November 2018	RE-ISSUED by CHEMSUPP

Product Name : **AMMONIUM FLUORIDE**

Classified as hazardous

1. Identification

GHS Product Identifier	AMMONIUM FLUORIDE
Company Name	CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)
Address	38 - 50 Bedford Street GILLMAN SA 5013 Australia
Telephone/Fax Number	Tel: (08) 8440-2000 Fax: (08) 8440-2001
(24 hour a day available)	CHEMCALL: 1800 127 406 (Australia) / +64-4-917-9888 (International)
Recommended use of the chemical and restrictions on use	Fluorides, analytical chemistry, laboratory reagent, digestion of silicates, antiseptic in brewing, etching glass, textile mordant, wood preservative and mothproofing.

Other Names

Name	Product Code
AMMONIUM FLUORIDE AR	AA123
Fluoroammonium	

Other Information

Chem-Supply Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Chem-Supply Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture	Acute Toxicity - Dermal: Category 3 Acute Toxicity - Inhalation: Category 3 Acute Toxicity - Oral: Category 3 Skin Corrosion/Irritation: Category 1 Specific target organ toxicity - Repeated Exposure: Category 1
Signal Word (s)	DANGER
Hazard Statement (s)	H301 Toxic if swallowed. H311 Toxic in contact with skin. H331 Toxic if inhaled. H314 Causes severe skin burns and eye damage. H372 Causes damage to organs through prolonged or repeated exposure.
Pictogram (s)	Corrosion, Skull and crossbones, Health hazard



Precautionary statement – Prevention	P260 Do not breathe dust/fume/gas/mist/vapours/spray. P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Precautionary statement – Response	P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P330 Rinse mouth. P331 Do NOT induce vomiting. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P361 Remove/Take off immediately all contaminated clothing. P363 Wash contaminated clothing before reuse. P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

	P310 Immediately call a POISON CENTER or doctor/physician. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Precautionary statement – Storage	P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up.
Precautionary statement – Disposal	P501 Dispose of contents/container to an approved waste disposal plant.
Other Information	Repeated exposure to a toxic material may produce general deterioration of health by an accumulation in one or more human organs.

3. Composition/information on ingredients

Chemical Characterization Solid

Ingredients

Name	CAS	Proportion	Hazard Symbol	Risk Phrase
Ammonium fluoride	12125-01-8	100 %		

4. First-aid measures

Inhalation	If inhaled, remove from contaminated area to fresh air immediately. If breathing is difficult, give oxygen. Apply artificial respiration with a respiratory medical device if not breathing. Do not use mouth to mouth resuscitation. Immediately medical attention is required.
Ingestion	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek immediate medical advice.
Skin	Immediately remove contaminated clothing and wash affected area with water for at least 15 minutes. Ensure contaminated clothing is washed before re-use. Seek medical advice /attention depending on the severity.
Eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek immediate medical assistance.
First Aid Facilities	Maintain eyewash fountain and safety shower in work area.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of the patient.
Other Information	For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

5. Fire-fighting measures

Suitable extinguishing media	Use fire extinguishing media appropriate for surrounding environment. Use water spray, dry chemical, carbon dioxide, or appropriate foam.
Hazards from Combustion Products	Ammonia and hydrogen fluoride gases are formed and emitted in fires.
Specific hazards arising from the chemical	Material does not burn.
Hazchem Code	2X
Decomposition Temp.	100 °C
Precautions in connection with Fire	Wear SCBA and chemical splash suit. Fully encapsulating, gas-tight suits should be worn for maximum protection.

6. Accidental release measures

Personal Precautions	Avoid raising a dust cloud. Use in ventilated areas or in fumehood. Avoid contact with skin, eyes, nose, mouth.
Personal Protection	Wear protective clothing specified for normal operations (see Section 8)
Clean-up Methods - Small Spillages	Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations. Evacuate unprotected personnel from danger area.

7. Handling and storage

Precautions for Safe Handling	Avoid ingestion and inhalation of material. Avoid contact with eyes, skin and clothing. Use with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid

	generation or accumulation of dusts.
Conditions for safe storage, including any incompatabilities	Store away from oxidizing agents. Keep containers closed at all times. Store in a cool, dry, well-ventilated area, out of direct sunlight. Store in plastic containers. Hygroscopic. Keep away from strong acids and strong bases. Do not store in glass containers.
Corrosiveness	Corrodes glass and metal (aluminium and steel) in high temperatures.
Storage Regulations	Refer Australian Standard AS 4452 - 1997 'The storage and handling of toxic substances'.

8. Exposure controls/personal protection

Occupational exposure limit values

Name	STEL		TWA		
	mg/m3	ppm	mg/m3	ppm	Footnote
Ammonium fluoride			2.5		As fluoride

Other Exposure Information	These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity. A time weighted average (TWA) has been established for Fluorides (as F) (Safe Work Australia) of 2.5 mg/m3. The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week.
Appropriate engineering controls	In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. These methods should be used in preference to personal protective equipment. In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.
Respiratory Protection	Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.
Eye Protection	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.
Hand Protection	Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance.
Personal Protective Equipment	Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.
Body Protection	Wear suitable protective clothing and gloves to prevent skin contact. Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
Hygiene Measures	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. Physical and chemical properties

Form	Solid
Appearance	White crystals.
Odour	Odourless.
Decomposition Temperature	100 °C
Solubility in Water	Soluble in water (820 g/L @ 20 °C)
Solubility in Organic Solvents	Slightly soluble in alcohol.

Specific Gravity	1.015
pH	~6 (50 g/l, H2O, 20 °C)
Flammability	Non combustible material.
Molecular Weight	37.04
Other Information	Cannot be obtained by evaporating its aqueous solution.

10. Stability and reactivity

Chemical Stability	Stable.
Incompatible Materials	Acids, alkali, quinine salts, chloride trifluoride, soluble calcium salts and oxidising agents.
Hazardous Decomposition Products	Very toxic fumes of ammonia, oxides of nitrogen and hydrogen fluoride.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Ingestion	Toxic if swallowed. Will cause corrosive damage to mucous membranes. Fluoride ions can reduce serum calcium levels possibly causing fatal hypocalcemia. Prolonged exposure to fluoride dusts results in perforation of the nasal septum. In general, the absorption of Fluoride ions and Ammonium salts causes local irritation symptoms, nausea, vomiting, diarrhoea, abdominal pain, fever, agitation, muscular weakness, low blood pressure, CNS disorders, spasms, narcotic conditions, respiratory paralysis and haemolysis.
Inhalation	Toxic by inhalation. Dust may be absorbed causing irritation and burns to mucous membrane and respiratory tract. Symptoms include of burning sensation, coughing, choking, laryngitis, wheezing, tightness in chest and shortness of breath. Acute inhalation may result in spasms, inflammation and edema of the larynx and bronchi, chemical pneumonitis, cyanosis and pulmonary edema.
Skin	Toxic in contact with skin. Corrosive.
Eye	Corrosive will cause corneal burns.
Carcinogenicity	No significant ingredient is classified as carinogenic by Safe Work Australiia. No significant ingredient is classified as carinogenic by International Agency for Reseach on Cancer.
STOT-repeated exposure	Specific target organ toxicity - Repeated Exposure: Category 1
Chronic Effects	Symptoms of overexposure may include nausea, salivation, vomiting, abdominal pain, diarrhoea, muscular weakness, convulsions, shock and death. Acute overexposure by inhalation may cause coughing, choking, chills lasting 1-2 hours after exposure. Fever, tightness in the chest, cyanosis and lung injury may be delayed 1-2 days. Chronic exposure may result in fluorosis. Symptoms include weight loss, brittleness of bones, osterosclerosis, anaemia, stiffness in the joints and discolouration of the teeth.
Mutagenicity	No evidence of mutagenic properties.

12. Ecological information

Ecotoxicity	Quantitative data on the ecological effect of this product are not available.

13. Disposal considerations

Disposal Considerations	Dispose of according to relevant local, state and federal government regulations.

14. Transport information

Transport Information	Dangerous Goods of Class 6 (Toxic and Infectious Substances) are incompatible in a placard load with any of the following: Class 1, Class 3, if the Class 3 dangerous goods are nitromethane, Class 8, if the Class 6 dangerous goods are cyanides and the Class 8 dangerous goods are acids; and are incompatible with food and food packaging in any quantity.
U.N. Number	2505
UN proper shipping name	AMMONIUM FLUORIDE

Classified as hazardous

Transport hazard class(es)	6.1
Hazchem Code	2X
Packaging Method	3.8.6.1
Packing Group	III
EPG Number	6.1.015
IERG Number	37

15. Regulatory information

Regulatory Information	Listed in the Australian Inventory of Chemical Substances (AICS). Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
Poisons Schedule	S6

16. Other Information

Literature References	'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia. Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997. National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007. Safe Work Australia, 'National Code of Practice fot the Preparation of Safety Data Sheets for Hazardous Chemicals', 2011. Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010. Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'. Safe Work Australia, 'Hazardous Substances Information System, 2005'. Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'. Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995) 3rd Edition]'.
Contact Person/Point	Paul McCarthy Ph. (08) 8440 2000 DISCLAIMER STATEMENT: All information provided in this data sheet or by our technical representatives is compiled from the best knowledge available to us. However, since data, safety standards and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, we make no warranty either expressed or implied, with respect to the completeness or accuracy to the information contained herein. Chem-Supply accepts no responsibility whatsoever for its accuracy or for any results that may be obtained by customers from using the data and disclaims all liability for reliance on information provided in this data sheet or by our technical representatives.
Empirical Formula & Structural Formula	NH_4F

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