Section 1 - Identification of The Material and Supplier

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Chemical nature: Acidic water solution of ammonium bifluoride (15 g/L) with surfactants and glycol ether solvent.

Trade Name: **GRIP-IT T FOR TILES**

Product Use: Anti-slip treatment for ceramic, porcelain and tessellated tiles.

Creation Date: March 2013

Revision: **2 (supersedes the October 2026 reissue)**

This version issued: **30 October 2026** and is valid for 5 years from this date.

Poisons Information Centre: Phone 13 11 26 from anywhere in Australia

Section 2 - Hazards Identification

This material is hazardous according to the criteria of Safe Work Australia GHS 7.

Dangerous Goods according to the Australian Dangerous Goods (ADG) Code.

SUSMP Classification: S6

GHS Signal word: DANGER

Hazard Classifications
Corrosive to Metals - Category 1
Acute Toxicity (Oral) - Category 3
Acute Toxicity (Dermal) - Category 3
Acute Toxicity (Inhalation) - Category 4
Skin Corrosion/Irritation - Category 1B
Serious Eye Damage/Eye Irritation - Category 1
Hazardous to the Aquatic Environment (Acute) - Category 3

HAZARD STATEMENT:

H290: May be corrosive to metals.
H301: Toxic if swallowed.
H311: Toxic in contact with skin.
H314: Causes severe skin burns and eye damage.
H332: Harmful if inhaled.
H402: Harmful to aquatic life.

PREVENTION

P234: Keep only in original container.
P260: Do not breathe fumes, mists, vapours or spray.
P261: Avoid breathing fumes, mists, vapours or spray.
P264: Wash contacted areas 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 and eye or face protection.

RESPONSE

P301+P310: IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower, then apply calcium gluconate gel. Seek medical attention.
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 CENTRE or doctor/physician.
P361+P364: Take off immediately all contaminated clothing and wash it before reuse.
P390: Absorb spillage to prevent material damage.

STORAGE

P405: Store locked up.
P406: Store in corrosive resistant container with a resistant inner liner.

DISPOSAL

P501: Dispose of contents and containers to landfill in accordance with local regulations.

Emergency Overview

Physical Description & Colour: Clear, colourless liquid.

Odour: No odour.

Major Health Hazards: Toxic in contact with skin and if swallowed, causes burns, harmful if inhaled. Note: in this context, Hydrofluoric acid includes ammonium bifluoride.

Hydrofluoric acid burns are a unique clinical entity. Dilute solutions deeply penetrate before dissociating, thus causing delayed injury and symptoms. Burns to the fingers and nail beds may leave the overlying nails intact.

Severe burns occur after exposure of concentrated (i.e., 50% or stronger solution) hydrofluoric acid to 1% or more body surface area (BSA), exposure to hydrofluoric acid of any concentration to 5% or more BSA, or inhalation of hydrofluoric acid fumes from a 60% or stronger solution. The vast majority of cases involve only small areas of exposure, usually on the digits.

Solutions of less than 7% may take several hours before onset of symptoms, resulting in delayed presentation, deeper penetration of the undissociated HF acid, and a more severe burn.

Pathophysiology: The two mechanisms that cause tissue damage are corrosive burn from the free hydrogen ions and chemical burn from tissue penetration of the fluoride ions. Fluoride ions penetrate and form insoluble salts with calcium and magnesium. Soluble salts also form with other cations but dissociate rapidly, releasing further fluoride ions and causing further tissue destruction.

Mortality/Morbidity: Local effects include tissue destruction and necrosis. Burns may involve underlying bone. Systemic fluoride ion poisoning from severe burns is associated with hypocalcaemia, hyperkalaemia, hypomagnesaemia, and sudden death. Deaths have been reported from concentrated acid burns to as little as 2.5% BSA. Safe Work Australia has a relevant publication on hydrogen fluoride.

Potential Health Effects - Inhalation

Short Term Exposure: This product is harmful; see symptoms above. May also be mildly irritating, although unlikely to cause more than mild transient discomfort. If liquid enters nasal passages it will cause pain and burn nasal membranes. Patients with inhalation burns may develop acute pulmonary oedema.

Long Term Exposure: No data for health effects associated with long term inhalation.

Potential Health Effects - Skin Contact

Short Term Exposure: Concentrated hydrofluoric acid solutions cause immediate pain and produce surface burns similar to those produced by other common acids (e.g., erythema, blistering and necrosis). Pain typically is described as deep, burning or throbbing and often is disproportionate to apparent skin involvement. Solutions of less than 7% may take several hours before onset of symptoms, resulting in delayed presentation, deeper penetration of the undissociated HF acid, and a more severe burn.

Long Term Exposure: No data for health effects associated with long term skin exposure.

Potential Health Effects - Eye Contact

Short Term Exposure: This product is corrosive to eyes. It will cause severe pain and corrosion of the eye and surrounding facial tissues. Unless exposure is quickly treated, lasting eye damage, blindness and facial scarring are likely.

Long Term Exposure: No data for health effects associated with long term eye exposure.

Potential Health Effects - Ingestion

Short Term Exposure: Mild poisoning causes nausea, vomiting, diarrhoea and abdominal pain. Blood may be vomited. Severe poisoning causes shock, blurred vision, muscle spasm, shallow breathing and convulsions. Kidney failure may occur later.

Long Term Exposure: Intake of more than 6 mg of fluorine per day may result in fluorosis, bone and joint damage. Hypocalcaemia and hypomagnesaemia can occur from absorption of fluoride ion into the blood stream.

Carcinogen Status: No significant ingredient is classified as carcinogenic by SWA, NTP or IARC.

Section 3 – Composition and Information on Ingredients

Ingredients	CAS No	Conc, %	TWA (mg/m³)	STEL (mg/m³)
Ammonium bifluoride	1341-49-7	15 g/L (approx. 1.5%)	2.5 (as F)	Not set
2-Butoxyethanol (butyl glycol)	111-76-2	1 - <10%	96.9 (20 ppm), Sk	242 (50 ppm)
Surfactants (alcohol ethoxylates / ethoxylated quaternary ammonium chloride)	Proprietary	1 - <10%	Not set	Not set
Other ingredients determined not to be hazardous	Various	<1%	Not set	Not set
Water	7732-18-5	to 100%	Not set	Not set

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non-hazardous ingredients are also possible.

Ammonium bifluoride content is 15 g/L, equivalent to approx. 1.5% w/w at the product's relative density (approx. 1.01). In acidic solution ammonium bifluoride forms hydrofluoric acid / fluoride ion; first aid and exposure advice in this SDS is written on that basis.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

Section 4 - First Aid Measures

General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 11 26 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this SDS with you when you call.

Immediately remove contaminated clothing and continually flush exposed skin areas with large volumes of water. Rinsing may be limited to 5 minutes if 0.13% benzalkonium chloride solution or 2.5% calcium gluconate gel is available, applied as soon as rinsing ends. If not available, rinsing must continue until medical treatment is given.

After thorough washing, soak affected areas in iced 0.13% benzalkonium chloride solution (use ice cubes, not shaved ice, to prevent frostbite) or apply soaked compresses, changed every 2-3 minutes, until pain is relieved or medical treatment is provided. Local anaesthetics should be avoided as relief of pain indicates success of treatment. Applier should wear chemical-protective gloves (e.g. butyl rubber).

Alternatively, gently massage a liberal quantity of calcium gluconate gel (or a gel prepared by adding 10 mL of 10% calcium gluconate injectable solution to 30 mL of water-soluble gel - do not use calcium chloride as it causes skin necrosis) into the area every 15 minutes until pain subsides/redness disappears or medical attention is available. Applier should wear chemical-protective gloves.

Medical attention must be provided immediately. Exposure to low concentrations may be followed by delayed onset of symptoms; seek immediate medical attention for all exposures to hydrofluoric acid of any concentration.

Inhalation: If symptoms of poisoning occur, contact a Poisons Information Centre or doctor immediately. Remove source of contamination or move victim to fresh air. If breathing is difficult, administer oxygen if trained to do so, preferably on a doctor's advice. Do not allow the victim to move unnecessarily. Symptoms of pulmonary oedema may be delayed up to 48 hours after exposure.

Skin Contact: See instructions above.

Eye Contact: Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for at least 20-30 minutes, holding the eyelids open. Neutral saline solution may be used once available. Do not interrupt flushing. Keep an emergency vehicle waiting if necessary (show this SDS to paramedics). Avoid rinsing contaminated water into the unaffected eye or onto the face. Repeat flushing if irritation persists. Call a Poisons Information Centre or doctor urgently. Take special care if the person is wearing contact lenses.

Ingestion: If swallowed, do NOT induce vomiting; rinse mouth thoroughly with water and contact a Poisons Information Centre or doctor immediately. Give activated charcoal if instructed. Seek urgent medical attention. See comments above regarding calcium gluconate treatment.

Section 5 - Fire Fighting Measures

Fire and Explosion Hazards: There is no risk of explosion from this product under normal circumstances if involved in a fire. Only small quantities of decomposition products are expected at temperatures normally achieved in a fire, and only after heating to dryness. Fire decomposition products are likely to be toxic and corrosive if inhaled; take appropriate protective measures.

Extinguishing Media: Not combustible. Use extinguishing media suited to the surrounding burning materials. Water fog or fine spray is the preferred medium for large fires. Try to contain spills and minimise spillage entering drains or waterways.

Fire Fighting: If a significant quantity of this product is involved in a fire, call the fire brigade. There is little danger of a violent reaction or explosion. Recommended PPE is liquid-tight chemical protective clothing and breathing apparatus.

Flash Point: Does not burn.

Upper/Lower Flammability Limits: Does not burn.

Autoignition Temperature: Not applicable - does not burn.

Flammability Class: Does not burn.

Section 6 - Accidental Release Measures

Accidental Release: This product is sold in small packages; accidental release from a single package is not usually a cause for concern. For minor spills, refer to product label instructions. It is good practice to wear rubber or PVC gloves when handling this product. In the event of a major spill, prevent spillage from entering drains or waterways and call emergency services. Avoid contact with incompatible materials listed in Section 10.

The contaminated area may be neutralised by washing with weak or dilute alkali; baking soda, washing soda and limestone are suitable. This material may be suitable for approved landfill disposal. Confirm legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use, and advise the laundry of the nature of the contamination.

Section 7 - Handling and Storage

Handling: Keep exposure to this product to a minimum and minimise the quantities kept in work areas. Refer to Section 8 for personal protective measures and ensure these are followed. The storage measures below should also be followed during handling to minimise risks. Avoid contact or contamination with incompatible materials listed in Section 10.

Storage: Scheduled Poison: observe all regulations on sale, transport and storage. Store locked up in a cool, well-ventilated area, out of reach of children, in the original plastic container only (attacks glass, ceramics and

many metals). Keep closed and check periodically for leaks. Keep away from materials in Section 10. Class 8 PG III Dangerous Good: WHS placard/manifest quantities apply to larger stores.

Section 8 - Exposure Controls and Personal Protection

The following Australian Standards will provide general advice regarding safety clothing and equipment: Respiratory equipment: AS/NZS 1715 and AS/NZS 1716, Protective Gloves: AS 2161, Occupational Protective Clothing: AS/NZS 4501, Industrial Eye Protection: AS 1336 and AS/NZS 1337, Occupational Protective Footwear: AS/NZS 2210.

SWA Exposure Limits	CAS No	TWA (ppm)	TWA (mg/m³)	STEL (mg/m³)
Fluorides (as F) - ammonium bifluoride	1341-49-7		2.5 mg/m3	Not set
Hydrogen fluoride (as F) - may be released	7664-39-3	Peak 3 ppm	Peak 2.6 mg/m3	Peak limitation
2-Butoxyethanol (Sk)	111-76-2	20 ppm	96.9 mg/m3	50 ppm (242 mg/m3)

Standards Referenced: AS/NZS 1715 (Respiratory equipment), AS 2161 (Protective Gloves), AS/NZS 4501 Set 2008 (Occupational Protective Clothing), AS1336 and AS/NZS 1337 (Industrial Eye Protection), AS/NZS 2210 (Occupational Protective Footwear).

Ventilation: Use only in a well-ventilated area. If natural ventilation is inadequate, use a fan.

Eye Protection: Eyes must be completely protected by splash-resistant goggles with a face shield. Surrounding skin areas must be covered. Emergency eyewash facilities must be available close to the area of use.

Skin Protection: Because of the hazardous nature of this product, ensure all skin areas are completely covered by impermeable gloves, overalls, hair covering, apron and face shield.

Protective Material Types: Suggested protective clothing materials: rubber, PVC, Viton.

Respirator: Usually no respirator is necessary when using this product. Consult the Australian Standard referenced above if in doubt; otherwise not normally necessary.

Safety deluge showers should, where practical, be provided near areas where this product is handled commercially.

Section 9 - Physical and Chemical Properties:

Physical Description & Colour:	Clear, colourless liquid.
Odour:	No odour.
Boiling Point:	Approximately 100°C at 100 kPa.
Freezing/Melting Point:	Approximately 0°C.
Volatiles:	Water component.
Vapour Pressure:	2.37 kPa at 20°C (water vapour pressure).
Vapour Density:	As for water.
Relative Density (Specific Gravity, 20°C):	Approx. 1.01
Water Solubility:	Completely soluble in water.
pH:	Approx. 3.5 - 4.5 (acidic)
Volatility:	No data.
Odour Threshold:	No data.
Evaporation Rate:	As for water.
Coefficient Oil/Water Distribution:	No data.
Flash Point:	Does not burn.
Autoignition Temperature:	Not applicable - does not burn.

Section 10 - Stability and Reactivity

Reactivity: Most strong acids react with inorganic and organic bases such as amines to form salts. They also react with many metals, liberating hydrogen gas; these reactions are often rapid and sometimes liberate much heat. They can also decompose many organic materials such as esters via hydrolysis.

Conditions to Avoid: Keep in a cool place, preferably below 30°C. Keep containers tightly closed and well ventilated, and isolated from combustible materials.

Incompatibilities: Bases, strong acids (release hydrogen fluoride), glass, ceramics, concrete and natural stone (etched), zinc, tin, aluminium and their alloys.

Fire Decomposition: Only small quantities of decomposition products are expected at temperatures normally achieved in a fire, and only after heating to dryness. Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. May form nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas in reducing atmospheres. May form hydrogen fluoride gas and other compounds of fluorine. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

Polymerisation: This product will not undergo polymerisation reactions.

Section 11 - Toxicological Information

Target Organs: Skin, eyes, respiratory tract. Systemic fluoride poisoning (low blood calcium and magnesium) can follow significant skin contact or ingestion.

Acute Toxicity: Ammonium bifluoride: LD50 (oral, rat) 130 mg/kg. No LD50 data available for the product. Hydrofluoric acid / fluoride burns can be delayed by several hours at this concentration.

Skin / Eye: Corrosive. Causes severe skin burns and eye damage.

Classification of Hazardous Ingredients: Ammonium bifluoride: Acute Toxicity (Oral) Category 3 (H301); Skin Corrosion Category 1B (H314); Corrosive to Metals Category 1 (H290). 2-Butoxyethanol: Acute Toxicity (Oral, Inhalation) Category 4 (H302, H332); Skin Irritation Category 2 (H315); Eye Irritation Category 2 (H319).

Section 12 - Ecological Information

This product is harmful to aquatic organisms. Salts, acids and bases are typically diluted and neutralised when released to the environment in small quantities.

Section 13 - Disposal Considerations

Disposal: This product may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If contaminated, it may be possible to separate the contamination. Only if neither of these options is suitable should landfill be considered, and it is recommended that the product be neutralised in a controlled manner before disposal.

Section 14 - Transport Information

UN Number:	3264
Proper Shipping Name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (contains ammonium bifluoride)
DG Class:	8
Subsidiary Risk:	None allocated
Packing Group:	III
Hazchem Code:	2X

ROAD AND RAIL TRANSPORT

Classified as Dangerous Goods Class 8 (Corrosive Substances), Packing Group III, by the criteria of the ADG Code.

MARINE TRANSPORT

Classified as Dangerous Goods Class 8 (Corrosive Substances), Packing Group III, for sea transport by the IMDG Code.

AIR TRANSPORT

Classified as Dangerous Goods Class 8 (Corrosive Substances), Packing Group III, for air transport by the IATA DGR.

Special Provisions: 223, 274

Limited Quantities: The ADG Code specifies a Limited Quantity value of 5 L for this entry (UN 3264, Packing Group III). Excepted quantity code E1.

Packaging Method: P001, IBC03, LP01

Segregation: Class 8 Corrosive Substances shall not be loaded in the same vehicle or freight container with Class 1 (Explosives), 4.3 (Dangerous When Wet Substances), 5.1 (Oxidising Agents), 5.2 (Organic Peroxides), 6 (Toxic Substances where the toxic substances are cyanides and the corrosives are acids), 7 (Radioactive Substances), or foodstuffs/foodstuff empties. They may be loaded with Classes 2.1, 2.2, 2.3, 3, 4.1, 4.2, 6 (except cyanides with acid corrosives) and 9.

Section 15 - Regulatory Information

AICIS: All significant ingredients in this formulation are listed on the Australian Industrial Chemicals Introduction Scheme (AICIS) inventory.

Poisons Schedule: Ammonium bifluoride is listed in the SUSMP (Poisons Standard); product classified S6.

Section 16 - Other Information

This SDS contains only safety-related information. For other data see product literature (Grip-It T for Tiles Technical Bulletin and label).

This revision (Revision 2, 30 October 2026) supersedes the October 2026 reissue (Revision 1) and the June 2023 SDS.

Changes in this revision: ammonium bifluoride content confirmed at 15 g/L (approx. 1.5% w/w); 2-butoxyethanol and surfactants disclosed; classification and transport (UN3264, Class 8, PG III) re-checked under GHS 7 (retained); relative density and pH added.

Acronyms:

ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail
AICS/AIIC	Australian Inventory of Industrial Chemicals
AICIS	Australian Industrial Chemicals Introduction Scheme
SWA	Safe Work Australia, formerly ASCC and NOHSC
CAS number	Chemical Abstracts Service Registry Number
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
SUSMP	Standard for the Uniform Scheduling of Medicines & Poisons
TWA / STEL	Time Weighted Average / Short Term Exposure Limit
UN Number	United Nations Number

THIS SDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS SDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.
IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS.
OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

Please read all labels carefully before using product.

This SDS is prepared in accord with the SWA document "Preparation of Safety Data Sheets for Hazardous Chemicals - Code of Practice" (July 2020) and GHS Revision 7.