



# Material Safety Data Sheet

*This material is hazardous according to criteria of NOHSC.*

*Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail.*

## 1. Identification of the substance/preparation and of the company/undertaking

**Product Name:** HYDROFLUOSILICIC ACID

**Supplier:** Incitec Pivot Limited  
**ABN:** 42 004 080 264  
**Street Address:** 70 Southbank Boulevard,  
Southbank, Victoria 3006  
Australia  
**Telephone Number:** 1800 333 197 (toll free)  
**Facsimile:** +61 3 8695 4419

**Emergency Telephone:** 1800 033 111 (ALL HOURS)

## 2. Composition/information on ingredients

**Product Description:** Water fluoridation, chemicals, electroplating, ceramics, disinfectants.  
Colourless, fuming liquid with a characteristic sour odour.

Fluorosilicic acid 16961-83-4	<25%	R34, R41
Water 7732-18-5	to 100%	Non hazardous

## 3. Hazards identification

**Risk Phrases:** Causes burns. Risk of serious damage to eyes.

**Poisons Schedule:** S7 Dangerous Poison.

## 4. First-aid measures

For advice, contact a Poisons Information Centre (Phone eg. Australia 131 126; New Zealand 0 800 764766) or a doctor.

**Inhalation:** Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

**Skin Contact:** If skin contact occurs, immediately remove contaminated clothing. Flush skin under running water for 15 minutes. Then apply calcium gluconate gel. Contact the Poisons Information Centre. For skin burns, cover with a clean, dry dressing until medical help is available.

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**Eye Contact:** If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.

**Ingestion:** Immediately rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek immediate medical assistance.

**Notes to physician:** Treat symptomatically. Effects may be delayed. Can cause corneal burns.

## 5. Fire-fighting measures

**Specific Hazards:** Non-combustible material.

**Fire-fighting advice:** Decomposes on heating emitting toxic fumes, including those of hydrogen fluoride. Keep containers cool with water spray. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition.

**Suitable Extinguishing Media:** Not combustible, however, if material is involved in a fire use: Water fog (or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder).

## 6. Accidental release measures

Clear area of all unprotected personnel. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Neutralise with lime or soda ash. Collect and seal in properly labelled containers or drums for disposal. If contamination of sewers or waterways has occurred advise local emergency services.

## 7. Handling and storage

**Handling advice:** Avoid skin and eye contact and breathing in vapour, mists and aerosols. Always add the acid to water, never the reverse.

**Storage advice:** Store in cool place and out of direct sunlight. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Keep dry - reacts with water, may lead to drum rupture. Keep containers closed when not in use - check regularly for leaks.

## 8. Exposure controls/personal protection

### Occupational Exposure Limits:

No value assigned for this specific material by the National Occupational Health and Safety Commission. However, Exposure Standard(s) for constituent(s):

Fluorides (as F): 8hr TWA = 2.5 mg/m<sup>3</sup>

As published by the National Occupational Health and Safety Commission.

TWA - The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.

These 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 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.

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## Engineering Control Measures:

Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Exposure Standards. If inhalation risk exists: Use with local exhaust ventilation or while wearing suitable mist respirator. Keep containers closed when not in use.

## Personal Protective Equipment:

Orica Personal Protection Guide No. 1, 1998: D - OVERALLS, RUBBER BOOTS, FACE SHIELD, SAFETY SHOES, GLOVES (Long), APRON.

Wear overalls, face shield, elbow-length impervious gloves, splash apron and rubber boots. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

If risk of inhalation exists, wear suitable mist respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

## 9. Physical and chemical properties

<b>Physical state:</b>	Liquid
<b>Colour:</b>	Colourless
<b>Odour:</b>	Characteristic Sour
<b>Solubility:</b>	Miscible with water.
<b>Specific Gravity:</b>	1.2 @ 15°C
<b>Vapour Pressure (20 °C):</b>	Not available
<b>Flash Point (°C):</b>	Not applicable
<b>Autoignition Temperature (°C):</b>	Not applicable
<b>% Volatile by Volume:</b>	Not available
<b>Solubility in water (g/L):</b>	Not available
<b>Melting Point/Range (°C):</b>	Not applicable
<b>Boiling Point/Range (°C):</b>	Not available
<b>Sublimation Point (°C):</b>	Not applicable
<b>pH:</b>	Not available
<b>Viscosity:</b>	Not available

## 10. Stability and reactivity

**Stability:** Exothermic reaction with water which may cause violent spattering. Corrosive to most metals liberating flammable hydrogen gas. Reacts violently with bases and organic chemicals .

## 11. Toxicological information

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

<b>Ingestion:</b>	Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract.
<b>Eye contact:</b>	A severe eye irritant. Corrosive to eyes; contact can cause corneal burns. Contamination of eyes can result in permanent injury.
<b>Skin contact:</b>	Contact with skin will result in severe irritation. Corrosive to skin - may cause skin burns.
<b>Inhalation:</b>	Breathing in mists or aerosols may produce respiratory irritation.

### Long Term Effects:

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Repeated or prolonged exposure may result in fluorosis.

## Toxicological Data:

No LD50 data available for the product. For the constituent FLUOROSILICIC ACID:

Oral LD50 (rat): 410 mg/kg  
SKIN: Corrosive.  
EYES: Corrosive.

## 12. Ecotoxicological information

Avoid contaminating waterways.

### Aquatic toxicity:

Toxic to aquatic organisms.

## 13. Disposal considerations

Refer to Waste Management Authority. Dispose of material through a licensed waste contractor. Decontamination and destruction of containers should be considered.

## 14. Transport information

### Road and Rail Transport

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail.

UN No: 1778  
Class-primary: 8 Corrosive  
Packing Group: II  
Proper Shipping Name: FLUOROSILICIC ACID

Hazchem Code: 2X

### Marine Transport

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

UN No: 1778  
Class-primary: 8 Corrosive  
Packing Group: II  
Proper Shipping Name: FLUOROSILICIC ACID

### Air Transport

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

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**Packing Group:** II  
**Proper Shipping Name:** FLUOROSILICIC ACID

## 15. Regulatory information

**Classification:** This material is hazardous according to criteria of NOHSC.  
C: Corrosive

**Risk Phrase(s):** R34: Causes burns.  
R41: Risk of serious damage to eyes.

**Safety Phrase(s):** S1/2: Keep locked up and out of the reach of children.  
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.  
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible).

**Poisons Schedule:** S7 Dangerous Poison.

## 16. Other Information

'Registry of Toxic Effects of Chemical Substances'. Ed. D. Sweet, US Dept. of Health & Human Services: Cincinnati, 2003.  
In: 'The Dictionary of Substances and their Effects'. Ed. Gangolli S. Royal Society of Chemistry, 1999.

Incitec Pivot Limited Contact Point  
MSDS - (03) 8695 4400

**Reason(s) for Issue:**  
First Issue Primary MSDS

This MSDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Incitec Pivot Limited cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Incitec Pivot representative or Incitec Pivot Limited at the contact details on page 1.

Incitec Pivot Limited's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.

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