

## 1. IDENTIFICATION

|                            |   |
|----------------------------|---|
| <b>Product Name</b>        | <b>Fluorosilicic acid, aqueous solution</b>   |
| <b>Other Names</b>         | Fluorosilicic Acid 19.5 - 21%; Fluorosilicic Acid 23 - 25%; Fluorosilicic Acid 27%  |
| <b>Uses</b>                | Auxiliary; Processing aid; Water treatment chemical; Chemical intermediate; Metal surface treatment; Laboratory chemicals; Biocide; Formulation additive; Surface cleaning. |
| <b>Chemical Family</b>     | No Data Available   |
| <b>Chemical Formula</b>    | Unspecified   |
| <b>Chemical Name</b>       | Contains: Hexafluorosilicic acid; Hydrogen fluoride   |
| <b>Product Description</b> | No Data Available   |

### Contact Details of the Supplier of this Safety Data Sheet

| Organisation            | Location   | Telephone       |
|-------------------------|--|-----------------|
| Redox Ltd               | 2 Swettenham Road<br>Minto NSW 2566<br>Australia   | +61-2-97333000  |
| Redox Ltd               | 11 Mayo Road<br>Wiri Auckland 2104<br>New Zealand  | +64-9-2506222   |
| Redox Inc.              | 3960 Paramount Boulevard<br>Suite 107<br>Lakewood CA 90712<br>USA  | +1-424-675-3200 |
| Redox Chemicals Sdn Bhd | Level 2, No. 8, Jalan Sapir 33/7<br>Seksyen 33, Shah Alam Premier Industrial Park<br>40400 Shah Alam<br>Sengalor, Malaysia | +60-3-5614-2111 |

### Emergency Contact Details

*For emergencies only; DO NOT contact these companies for general product advice.*

| Organisation               | Location     | Telephone                                  |
|----------------------------|--------------|--|
| Poisons Information Centre | Westmead NSW | 1800-251525<br>131126                      |
| Chemcall                   | Australia    | 1800-127406<br>+64-4-9179888               |
| Chemcall                   | Malaysia     | +64-4-9179888                              |
| Chemcall                   | New Zealand  | 0800-243622<br>+64-4-9179888               |
| National Poisons Centre    | New Zealand  | 0800-764766                                |
| CHEMTREC                   | USA & Canada | 1-800-424-9300 CN723420<br>+1-703-527-3887 |


## 2. HAZARD IDENTIFICATION

### Poisons Schedule (Aust)

Schedule 7

# SAFETY DATA SHEET FLUOROSILICIC ACID, AQUEOUS SOLUTION REVISION 4, DATE 03 MAY 2022

## Globally Harmonised System

|                                 |   |  |  |
|---------------------------------|---|--|--|
| <b>Hazard Classification</b>    | Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)  |  |  |
| <b>Hazard Categories</b>        | Acute Toxicity (Oral) - Category 4<br>Acute Toxicity (Dermal) - Category 3<br>Acute Toxicity (Inhalation) - Category 4<br>Skin Corrosion/Irritation - Category 1B |  |  |
| <b>Pictograms</b>               |    |  |  |
| <b>Signal Word</b>              | Danger  |  |  |
| <b>Hazard Statements</b>        | <b>H302 + H332</b>  | Harmful if swallowed or if inhaled.      |  |
|                                 | <b>H311</b>   | Toxic in contact with skin.              |  |
|                                 | <b>H314</b>   | Causes severe skin burns and eye damage. |  |
| <b>Precautionary Statements</b> | Prevention  | <b>P280</b>                              | Wear protective gloves/protective clothing/eye protection/face protection.   |
|                                 |   | <b>P260</b>                              | Do not breathe fume/gas/mist/vapours/spray.  |
|                                 |   | <b>P270</b>                              | Do not eat, drink or smoke when using this product.  |
|                                 |   | <b>P271</b>                              | Use only outdoors or in a well-ventilated area.  |
|                                 | Response  | <b>P301 + P330 + P331</b>                | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.   |
|                                 |   | <b>P303 + P361 + P353</b>                | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.                           |
|                                 |   | <b>P304 + P340</b>                       | IF INHALED: Remove victim to fresh air and keep comfortable for breathing.   |
|                                 |   | <b>P305 + P351 + P338</b>                | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
|                                 |   | <b>P310</b>                              | Immediately call a POISON CENTER or doctor.  |
|                                 |   | <b>P363</b>                              | Wash contaminated clothing before reuse.   |
|                                 |   | <b>P321</b>                              | Specific treatment (see First Aid Measures on Safety Data Sheet).  |
|                                 | Storage   | <b>P405</b>                              | Store locked up.   |
|                                 | Disposal  | <b>P501</b>                              | Dispose of contents/container in accordance with local / regional / national / international regulations.                        |

## National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

**Dangerous Goods Classification** Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

## Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

**HSNO Classifications** Health Hazards **8.2B** Substances that are corrosive to dermal tissue UN PGII  
**8.3A** Substances that are corrosive to ocular tissue

**3. COMPOSITION/INFORMATION ON INGREDIENTS***Ingredients*

| Chemical Entity        | Formula | CAS Number | Proportion |
|------------------------|---------|------------|------------|
| Hexafluorosilicic acid | F6Si.2H | 16961-83-4 | 18 - 32 %  |
| Hydrogen fluoride      | HF      | 7664-39-3  | 0.5 - 1 %  |
| Water                  | H2O     | 7732-18-5  | Balance %  |

**4. FIRST AID MEASURES***Description of necessary measures according to routes of exposure*

|  |   |
|--|---|
| <b>Swallowed</b>                                 | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a Poison Centre or doctor/physician for advice. Never give anything by mouth to an unconscious person. Get immediate medical attention!   |
| <b>Eye</b>                                       | IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes. Get immediate medical attention!<br>*Do not rub affected area.   |
| <b>Skin</b>                                      | IF ON SKIN (or hair): Remove and isolate contaminated clothing and shoes. Immediately flush skin and hair under running water for at least 15 minutes. Then apply calcium gluconate gel. Immediately call a Poison Centre or doctor/physician for advice. Get immediate medical attention!<br>*For minor skin contact, avoid spreading material on unaffected skin.   |
| <b>Inhaled</b>                                   | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Give artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult. Delayed pulmonary edema may occur. Get immediate medical attention!   |
| <b>Advice to Doctor</b>                          | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Keep victim calm and warm. Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed. Treat symptomatically and supportively. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. |
| <b>Medical Conditions Aggravated by Exposure</b> | No information available.   |

**5. FIRE FIGHTING MEASURES**

|   |  |
|---|--|
| <b>General Measures</b>                   | Move containers from fire area if you can do it without risk. Cool containers with water spray until well after fire is out. Dike fire-control water for later disposal; do not scatter the material.  |
| <b>Flammability Conditions</b>            | Non-combustible; substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.  |
| <b>Extinguishing Media</b>                | If material is involved in a fire, use extinguishing measures that are appropriate to local circumstances and the surrounding environment.   |
| <b>Fire and Explosion Hazard</b>          | Contact with metals may evolve flammable hydrogen gas. Containers may explode when heated.   |
| <b>Hazardous Products of Combustion</b>   | Fire may produce irritating, toxic and/or corrosive gases, including Hydrogen, Hydrogen fluoride, SiH4.  |
| <b>Special Fire Fighting Instructions</b> | Contain runoff from fire control or dilution water - Runoff may be corrosive and/or toxic and cause pollution.   |
| <b>Personal Protective Equipment</b>      | Wear positive pressure self-contained breathing apparatus (SCBA) and chemical protective clothing (It may provide little or no thermal protection). Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it |

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is not effective in spill situations where direct contact with the substance is possible.

|                                  |                   |
|----------------------------------|-------------------|
| <b>Flash Point</b>               | No Data Available |
| <b>Lower Explosion Limit</b>     | No Data Available |
| <b>Upper Explosion Limit</b>     | No Data Available |
| <b>Auto Ignition Temperature</b> | No Data Available |
| <b>Hazchem Code</b>              | 2X                |

## 6. ACCIDENTAL RELEASE MEASURES

|   |  |
|---|--|
| <b>General Response Procedure</b>           | Ensure adequate ventilation - Ventilate enclosed spaces before entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch or walk through spilled material. Do not breathe mist/vapours and prevent contact with eyes, skin and clothing. |
| <b>Clean Up Procedures</b>                  | Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers for disposal (see SECTION 13).   |
| <b>Containment</b>                          | Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas.  |
| <b>Decontamination</b>                      | No information available.  |
| <b>Environmental Precautionary Measures</b> | Spillages and decontamination runoff should be prevented from entering drains and watercourses.  |
| <b>Evacuation Criteria</b>                  | Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher ground.   |
| <b>Personal Precautionary Measures</b>      | Wear positive pressure self-contained breathing apparatus (SCBA) and chemical protective clothing. Structural firefighter's protective clothing is not effective in spill situations where direct contact with the substance is possible.  |

## 7. HANDLING AND STORAGE

|                  |  |
|------------------|--|
| <b>Handling</b>  | Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation - Handle product only in closed system or provide appropriate exhaust ventilation. Handle in accordance with good industrial hygiene and safety practice. Do not breathe mist/vapours and prevent contact with eyes, skin and clothing. Do not ingest. Wear protective gloves/protective clothing/eye protection/face protection (see SECTION 8). To avoid thermal decomposition, do not overheat (Heating above 70°C). |
| <b>Storage</b>   | Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep containers tightly closed. Ensure containers are adequately labelled and protected from physical damage. Check regularly for leaks or spills. Keep away from heat and sources of ignition - No smoking. Keep away from foodstuffs and incompatible materials (see SECTION 10). Store locked up.<br>*Provide acid-resistant floor.   |
| <b>Container</b> | Use rubberised containers. Use receptacles with fluoroplastic lining.<br>*Suitable container/equipment material: PVC, PP, PE, PTFE.  |

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

|                          |  |
|--------------------------|--|
| <b>General</b>           | No specific exposure standards are available for this product. For Fluorides (as F):<br>- Safe Work Australia Exposure Standard: TWA = 2.5 mg/m <sup>3</sup><br>- New Zealand Workplace Exposure Standard [Next review 2023]: TWA = 2.5 mg/m <sup>3</sup> (bio). |
| <b>Exposure Limits</b>   | No Data Available  |
| <b>Biological Limits</b> | EXPOSURE: Fluorides:<br>- Determinant: Fluoride in urine<br>*Prior to shift, BEI: 2 mg/L<br>*End of shift, BEI: 3 mg/L   |

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|                                      |  |
|--------------------------------------|--|
| <b>Engineering Measures</b>          | A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.   |
| <b>Personal Protection Equipment</b> | <ul style="list-style-type: none"><li>- Respiratory protection: In case of inadequate ventilation, wear respiratory protection. Recommended: Where an inhalation risk exists, wear an Air-line respirator or a Full-face Type B (Inorganic and Acid gas) respirator.</li><li>- Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Tight sealing safety goggles; Face protection shield.</li><li>- Hand protection: Wear protective gloves. Recommended: Wear full-length impervious gloves, e.g. Butyl rubber, Nitrile rubber, Fluorocarbon rubber (Viton), Chloroprene gloves.</li><li>- Protective clothing: Wear appropriate personal protective clothing to prevent skin contact. Recommended: Long sleeved clothing or impervious coveralls and PVC boots. When using large quantities or where heavy contamination is likely, wear a PVC apron.</li></ul> |
| <b>Special Hazards Precautions</b>   | No information available.  |
| <b>Work Hygienic Practices</b>       | Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Take off immediately all contaminated clothing and wash it before reuse. Regular cleaning of equipment, work area and clothing is recommended. Contaminated work clothing should not be allowed out of the workplace.   |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                       |   |
|---------------------------------------|---|
| <b>Physical State</b>                 | Liquid  |
| <b>Appearance</b>                     | Aqueous solution                              |
| <b>Odour</b>                          | Pungent                                       |
| <b>Colour</b>                         | Colourless                                    |
| <b>pH</b>                             | <2  |
| <b>Vapour Pressure</b>                | 23 - 30 hPa (10 - 35 %) (@ No Data Available) |
| <b>Relative Vapour Density</b>        | 4.98 Air = 1                                  |
| <b>Boiling Point</b>                  | No Data Available                             |
| <b>Melting Point</b>                  | No Data Available                             |
| <b>Freezing Point</b>                 | -15.5 °C                                      |
| <b>Solubility</b>                     | Soluble in water                              |
| <b>Specific Gravity</b>               | No Data Available                             |
| <b>Flash Point</b>                    | No Data Available                             |
| <b>Auto Ignition Temp</b>             | No Data Available                             |
| <b>Evaporation Rate</b>               | No Data Available                             |
| <b>Bulk Density</b>                   | No Data Available                             |
| <b>Corrosion Rate</b>                 | No Data Available                             |
| <b>Decomposition Temperature</b>      | No Data Available                             |
| <b>Density</b>                        | No Data Available                             |
| <b>Specific Heat</b>                  | No Data Available                             |
| <b>Molecular Weight</b>               | No Data Available                             |
| <b>Net Propellant Weight</b>          | No Data Available                             |
| <b>Octanol Water Coefficient</b>      | No Data Available                             |
| <b>Particle Size</b>                  | No Data Available                             |
| <b>Partition Coefficient</b>          | No Data Available                             |
| <b>Saturated Vapour Concentration</b> | No Data Available                             |
| <b>Vapour Temperature</b>             | 20 °C   |
| <b>Viscosity</b>                      | 6.5 mPa.s (@ No Data Available)               |
| <b>Volatile Percent</b>               | No Data Available                             |
| <b>VOC Volume</b>                     | No Data Available                             |

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|   |  |
|---|--|
| <b>Additional Characteristics</b>                                     | No information available.  |
| <b>Potential for Dust Explosion</b>                                   | Not applicable.  |
| <b>Fast or Intensely Burning Characteristics</b>                      | No information available.  |
| <b>Flame Propagation or Burning Rate of Solid Materials</b>           | No information available.  |
| <b>Non-Flammables That Could Contribute Unusual Hazards to a Fire</b> | No information available.  |
| <b>Properties That May Initiate or Contribute to Fire Intensity</b>   | Non-combustible; substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.                    |
| <b>Reactions That Release Gases or Vapours</b>                        | Fire/thermal decomposition may produce irritating, toxic and/or corrosive gases, including Hydrogen, Hydrogen fluoride, SiH <sub>4</sub> . |
| <b>Release of Invisible Flammable Vapours and Gases</b>               | Contact with metals may evolve flammable hydrogen gas.   |

## 10. STABILITY AND REACTIVITY

|   |  |
|---|--|
| <b>General Information</b>              | Contact with metals may evolve flammable hydrogen gas. Attacks materials containing glass and silicate. May evolve toxic gases (fluorides) when heated to decomposition. |
| <b>Chemical Stability</b>               | Stable under recommended conditions of storage.  |
| <b>Conditions to Avoid</b>              | To avoid thermal decomposition, do not overheat. Keep away from heat and sources of ignition.  |
| <b>Materials to Avoid</b>               | Incompatible/reactive with oxidising agents, alkalis and metals.   |
| <b>Hazardous Decomposition Products</b> | Fire/thermal decomposition may produce irritating, toxic and/or corrosive gases, including Hydrogen, Hydrogen fluoride, SiH <sub>4</sub> .                               |
| <b>Hazardous Polymerisation</b>         | Polymerisation will not occur.   |

## 11. TOXICOLOGICAL INFORMATION

|                            |  |
|----------------------------|--|
| <b>General Information</b> | <ul style="list-style-type: none"><li>- Acute toxicity: Harmful if swallowed and if inhaled. Toxic in contact with skin.</li><li>*Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.</li><li>*Corrosive by inhalation. Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal.</li><li>- Skin corrosion/irritation: Causes severe skin burns. Corrosive.</li><li>- Eye damage/irritation: Causes serious eye damage. Corrosive to the eyes and may cause severe damage including blindness.</li><li>- Respiratory/skin sensitisation: Based on available data, the classification criteria are not met.</li><li>- Germ cell mutagenicity: Based on available data, the classification criteria are not met.</li><li>- Carcinogenicity: Based on available data, the classification criteria are not met.</li><li>- Reproductive toxicity: Based on available data, the classification criteria are not met.</li><li>- STOT (single exposure): Based on available data, the classification criteria are not met.</li><li>- STOT (repeated exposure): Based on available data, the classification criteria are not met.</li><li>- Aspiration toxicity: Not expected.</li></ul> |
|----------------------------|--|

**Acute**

|                            |  |
|----------------------------|--|
| <b>Ingestion</b>           | Acute toxicity (Oral):<br>- Acute toxicity estimate (ATEmix): 501.00 mg/kg [Supplier's SDS].<br>COMPONENT: Hexafluorosilicic acid:<br>- LD50, Rat: 430 mg/kg   |
| <b>Other</b>               | Acute toxicity (Dermal):<br>- Acute toxicity estimate (ATEmix): 500.00 mg/kg [Supplier's SDS].   |
| <b>Inhalation</b>          | Acute toxicity (Inhalation):<br>- Acute toxicity estimate (ATEmix): 3.5571 mg/l (dust/mist) [Supplier's SDS].<br>COMPONENT: Hexafluorosilicic acid:<br>- LC50, Rat: 1.11 mg/L (1 h)<br>COMPONENT: Hydrogen fluoride:<br>- LC50, Rat: 0.79 mg/L (1 h) |
| <b>Carcinogen Category</b> | None   |

**12. ECOLOGICAL INFORMATION**

|                                  |  |
|----------------------------------|--|
| <b>Ecotoxicity</b>               | Aquatic toxicity:<br>COMPONENT: Hexafluorosilicic acid:<br>- LC50, Fish (Lepomis macrochirus): 50 mg/L (96 h).<br>- EC50, Crustacea (Daphnia sp.): 97 - 352 mg/L [read-across].<br>- EC50, Algae/aquatic plants: 43 - 122 mg/L<br>- NOEC, Algae/aquatic plants: 50 - 249 mg/L [read-across].<br>COMPONENT: Hydrogen fluoride:<br>- EC50, Crustacea (Daphnia species): 270 mg/L (48 h). |
| <b>Persistence/Degradability</b> | Not relevant for inorganic substance.  |
| <b>Mobility</b>                  | No information available.  |
| <b>Environmental Fate</b>        | Harmful effect due to pH shift. Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.<br>*No endocrine disrupting properties are known.   |
| <b>Bioaccumulation Potential</b> | This product dissociates into silicate and fluoride ions. Fluoride accumulates in aquatic organisms predominantly in the exoskeleton of crustacea and in the skeleton of fish; no accumulation was reported for edible tissue.<br>COMPONENT: Hydrogen fluoride:<br>- Partition coefficient: -1.4   |
| <b>Environmental Impact</b>      | No Data Available  |

**13. DISPOSAL CONSIDERATIONS**

|  |  |
|--|--|
| <b>General Information</b>               | Dispose of waste from residues/unused products in accordance with local/regional/national regulations.                 |
| <b>Special Precautions for Land Fill</b> | Contaminated packaging: Empty containers should be disposed of in accordance with all applicable laws and regulations. |

**14. TRANSPORT INFORMATION****Land Transport (Australia)**

ADG Code

**Proper Shipping Name** FLUOROSILICIC ACID

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|                           |  |
|---------------------------|--|
| <b>Class</b>              | 8 Corrosive Substances                               |
| <b>Subsidiary Risk(s)</b> | No Data Available                                    |
| <b>EPG</b>                | 37 Toxic And/Or Corrosive Substances Non-Combustible |
| <b>UN Number</b>          | 1778   |
| <b>Hazchem</b>            | 2X   |
| <b>Pack Group</b>         | II   |
| <b>Special Provision</b>  | No Data Available                                    |

## Land Transport (Malaysia)

ADR Code

|                             |  |
|-----------------------------|--|
| <b>Proper Shipping Name</b> | FLUOROSILICIC ACID                                   |
| <b>Class</b>                | 8 Corrosive Substances                               |
| <b>Subsidiary Risk(s)</b>   | No Data Available                                    |
| <b>EPG</b>                  | 37 Toxic And/Or Corrosive Substances Non-Combustible |
| <b>UN Number</b>            | 1778   |
| <b>Hazchem</b>              | 2X   |
| <b>Pack Group</b>           | II   |
| <b>Special Provision</b>    | No Data Available                                    |

## Land Transport (New Zealand)

NZS5433

|                             |  |
|-----------------------------|--|
| <b>Proper Shipping Name</b> | FLUOROSILICIC ACID                                   |
| <b>Class</b>                | 8 Corrosive Substances                               |
| <b>Subsidiary Risk(s)</b>   | No Data Available                                    |
| <b>EPG</b>                  | 37 Toxic And/Or Corrosive Substances Non-Combustible |
| <b>UN Number</b>            | 1778   |
| <b>Hazchem</b>              | 2X   |
| <b>Pack Group</b>           | II   |
| <b>Special Provision</b>    | No Data Available                                    |

## Land Transport (United States of America)

US DOT

|                             |   |
|-----------------------------|---|
| <b>Proper Shipping Name</b> | FLUOROSILICIC ACID  |
| <b>Class</b>                | 8 Corrosive Substances                                    |
| <b>Subsidiary Risk(s)</b>   | No Data Available   |
| <b>ERG</b>                  | 154 Substances - Toxic and/or Corrosive (Non-Combustible) |
| <b>UN Number</b>            | 1778  |
| <b>Hazchem</b>              | 2X  |
| <b>Pack Group</b>           | II  |
| <b>Special Provision</b>    | No Data Available   |

## Sea Transport

IMDG Code

|                             |                        |
|-----------------------------|------------------------|
| <b>Proper Shipping Name</b> | FLUOROSILICIC ACID     |
| <b>Class</b>                | 8 Corrosive Substances |
| <b>Subsidiary Risk(s)</b>   | No Data Available      |
| <b>UN Number</b>            | 1778                   |
| <b>Hazchem</b>              | 2X                     |



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|                          |                   |
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| <b>Pack Group</b>        | II                |
| <b>Special Provision</b> | No Data Available |
| <b>EMS</b>               | F-A, S-B          |
| <b>Marine Pollutant</b>  | No                |

## Air Transport

IATA DGR

|                             |                        |
|-----------------------------|------------------------|
| <b>Proper Shipping Name</b> | FLUOROSILICIC ACID     |
| <b>Class</b>                | 8 Corrosive Substances |
| <b>Subsidiary Risk(s)</b>   | No Data Available      |
| <b>UN Number</b>            | 1778                   |
| <b>Hazchem</b>              | 2X                     |
| <b>Pack Group</b>           | II                     |
| <b>Special Provision</b>    | No Data Available      |

## National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

|                                       |   |
|---------------------------------------|---|
| <b>Dangerous Goods Classification</b> | Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code) |
|---------------------------------------|---|

## 15. REGULATORY INFORMATION

**General Information** HYDROSILICOFLUORIC ACID (excluding its salts and derivatives) is listed in the SUSMP in Schedule 7 except when included in Schedule 5 or 6.

**Poisons Schedule (Aust)** Schedule 7

## Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

**Approval Code** HSR002491  
HSR004496 (Revoked)

## National/Regional Inventories

|                          |                  |
|--------------------------|------------------|
| <b>Australia (AIC)</b>   | Listed           |
| <b>Canada (DSL)</b>      | Listed           |
| <b>Canada (NDSL)</b>     | Not Listed       |
| <b>China (IECSC)</b>     | Listed           |
| <b>Europe (EINECS)</b>   | 241-034-8        |
| <b>Europe (REACH)</b>    | 01-2119488906-19 |
| <b>Japan (ENCS/METI)</b> | Listed           |
| <b>Korea (KECI)</b>      | Listed           |

|  |                |
|--|----------------|
| Malaysia (EHS Register)                        | Listed         |
| New Zealand (NZIoC)                            | Listed         |
| Philippines (PICCS)                            | Listed         |
| Switzerland (Giftliste 1)                      | Not Determined |
| Switzerland (Inventory of Notified Substances) | Not Determined |
| Taiwan (NCSR)                                  | Listed         |
| USA (TSCA)                                     | Listed         |

## 16. OTHER INFORMATION

|                       |   |
|-----------------------|---|
| Related Product Codes | FLSIAC1000, FLSIAC1001, FLSIAC1002, FLSIAC1003, FLSIAC1004, FLSIAC1005, FLSIAC1006, FLSIAC1007, FLSIAC1200, FLSIAC1400, FLSIAC1500, FLSIAC1600, FLSIAC1700, FLSIAC1701, FLSIAC1725, FLSIAC1800, FLSIAC1900, FLSIAC1950, FLSIAC1951, FLSIAC1952, FLSIAC1953, FLSIAC2000, FLSIAC2001, FLSIAC2002, FLSIAC2100, FLSIAC2200, FLSIAC2300, FLSIAC2301, FLSIAC2400, FLSIAC2401, FLSIAC2500, FLSIAC3000, FLSIAC3500, FLSIAC3501, FLSIAC4000, FLSIAC4001, FLSIAC4100, FLSIAC4500, FLSIAC5000  |
| Revision              | 4   |
| Revision Date         | 03 May 2022   |
| Reason for Issue      | Updated SDS   |
| Key/Legend            | <p>&lt; Less Than<br/>&gt; Greater Than</p> <p><b>AICS</b> Australian Inventory of Chemical Substances<br/> <b>atm</b> Atmosphere<br/> <b>CAS</b> Chemical Abstracts Service (Registry Number)<br/> <b>cm<sup>2</sup></b> Square Centimetres<br/> <b>CO<sub>2</sub></b> Carbon Dioxide<br/> <b>COD</b> Chemical Oxygen Demand<br/> <b>deg C (°C)</b> Degrees Celcius<br/> <b>EPA (New Zealand)</b> Environmental Protection Authority of New Zealand<br/> <b>deg F (°F)</b> Degrees Fahrenheit<br/> <b>g</b> Grams<br/> <b>g/cm<sup>3</sup></b> Grams per Cubic Centimetre<br/> <b>g/l</b> Grams per Litre<br/> <b>HSNO</b> Hazardous Substance and New Organism<br/> <b>IDLH</b> Immediately Dangerous to Life and Health<br/> <b>immiscible</b> Liquids are insoluable in each other.<br/> <b>inHg</b> Inch of Mercury<br/> <b>inH<sub>2</sub>O</b> Inch of Water<br/> <b>K</b> Kelvin<br/> <b>kg</b> Kilogram<br/> <b>kg/m<sup>3</sup></b> Kilograms per Cubic Metre<br/> <b>lb</b> Pound<br/> <b>LC50</b> LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.<br/> <b>LD50</b> LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.<br/> <b>ltr or L</b> Litre<br/> <b>m<sup>3</sup></b> Cubic Metre<br/> <b>mbar</b> Millibar<br/> <b>mg</b> Milligram<br/> <b>mg/24H</b> Milligrams per 24 Hours<br/> <b>mg/kg</b> Milligrams per Kilogram<br/> <b>mg/m<sup>3</sup></b> Milligrams per Cubic Metre</p> |

# SAFETY DATA SHEET FLUOROSILICIC ACID, AQUEOUS SOLUTION REVISION 4, DATE 03 MAY 2022

**Misc or Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.

**mm** Millimetre

**mmH<sub>2</sub>O** Millimetres of Water

**mPa.s** Millipascals per Second

**N/A** Not Applicable

**NIOSH** National Institute for Occupational Safety and Health

**NOHSC** National Occupational Health and Safety Commission

**OECD** Organisation for Economic Co-operation and Development

**Oz** Ounce

**PEL** Permissible Exposure Limit

**Pa** Pascal

**ppb** Parts per Billion

**ppm** Parts per Million

**ppm/2h** Parts per Million per 2 Hours

**ppm/6h** Parts per Million per 6 Hours

**psi** Pounds per Square Inch

**R** Rankine

**RCP** Reciprocal Calculation Procedure

**STEL** Short Term Exposure Limit

**TLV** Threshold Limit Value

**tne** Tonne

**TWA** Time Weighted Average

**ug/24H** Micrograms per 24 Hours

**UN** United Nations

**wt** Weight