

SAFETY DATA SHEET

HYDROFLUOROSILICIC ACID (23 - 26%)

Section 1. Identification

Product identifier : HYDROFLUOROSILICIC ACID (23 - 26%)
Product code : HFSA
SDS # : 217
Other means of identification : Hexafluorosilicic acid; Fluorosilicic acid; Fluosilicic acid.
Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Water treatment chemical. Raw material. Manufacture of inorganic products.

Uses advised against

Product is not intended for consumer use. Reserved for industrial and professional use only.

Supplier's details

Alliance Chemical
204 South Edmond St
Taylor, Texas, 76574
512-365-6838

Emergency telephone number (with hours of operation) : Alliance Chemical
24 HOUR EMERGENCY TELEPHONE NUMBERS:
CHEMTEL - 1-800-255-3924 (24 Hours/Day, 7 Days/Week)

Section 2. Hazard identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture : CORROSIVE TO METALS - Category 1
ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (dermal) - Category 4
ACUTE TOXICITY (inhalation) - Category 4
SKIN CORROSION - Category 1B
SERIOUS EYE DAMAGE - Category 1

Section 2. Hazard identification

GHS label elements

Hazard pictograms



Signal word

: Danger

Hazard statements

: May be corrosive to metals.
 Harmful if swallowed, in contact with skin or if inhaled.
 Causes severe skin burns and eye damage.

Precautionary statements

General

: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention

: Wear protective gloves, protective clothing and eye or face protection. Keep only in original packaging. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

Response

: Absorb spillage to prevent material damage. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Immediately call a POISON CENTER or doctor. Wash contaminated clothing before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor. Specific treatment (see First Aid instruction).

Storage

: Store locked up. Store in a corrosion resistant container with a resistant inner liner.

Disposal

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

| Ingredient name | % (w/w) | CAS number |
|--------------------|---------|------------|
| fluorosilicic acid | 23 - 26 | 16961-83-4 |
| water | 74 - 77 | 7732-18-5 |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

Eye contact

: CORROSIVE. Begin eye irrigation immediately. All eye exposures require medical evaluation following decontamination. Immediately rinse eyes with large quantities of water or saline for a minimum 30 minutes, longer irrigation time is preferred if possible. If possible, remove contact lenses being careful not to cause additional eye damage. If the initial water supply is insufficient, keep the affected area wet with a moist cloth and transfer the person to the nearest place where rinsing can be continued for the recommended length of time. Call an ambulance for transport to hospital. Continue eye irrigation during transport. For additional advice call the medical emergency number on this safety data sheet or your poison center or doctor.

Section 4. First-aid measures

- Inhalation** : CORROSIVE. If mists or vapors are present in unknown or excessive concentrations, rescuers must wear appropriate respiratory protection and a suit resistant to acids (Level B or C). REMOVE PERSON TO FRESH AIR. Watch closely for signs of wheezing and breathing difficulties. Maintain an open airway. Oxygen may be administered by trained personnel. Affected persons who have stopped breathing or are having difficulty breathing or are unconscious need immediate medical attention. Call an ambulance for transport to hospital. For additional advice call the medical emergency number on this SDS or your poison center or doctor. No action shall be taken involving any personal risk or without suitable training. Mouth-to-mouth resuscitation of oral exposure patients is not recommended. First-aiders with contaminated clothing should be properly decontaminated.
- Skin contact** : CORROSIVE. Causes severe burns. Immediately begin rinsing the affected areas with water. Remove contaminated clothing and shoes. Affected areas should be rinsed for a minimum 30 minutes, longer irrigation time is preferred if possible, due to the chemical reactions that occur. Luke-warm water is recommended for continued irrigation to prevent hypothermia. Conscious persons without breathing difficulties may benefit from prolonged irrigation in a fixed shower or bathing facility prior to hospital transport. Call an ambulance for transport to hospital. Continue skin irrigation during transport. For additional advice call the medical emergency number on this safety data sheet or your poison center or doctor. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : CORROSIVE. May cause severe burns to the mouth, throat, and stomach. If the affected person requires cardiopulmonary resuscitation, avoid mouth to mouth contact. Do not induce vomiting. If vomiting occurs, attempt to keep head lower than the chest so that vomit does not enter the lungs. Wash face and mouth with water to remove visible material. If the exposed person is conscious and can swallow, give 1-2 sips of water. Do not give anything else by mouth. Loosen tight clothing such as collar, tie, belt or waistband to prevent any breathing restrictions. For signs of breathing difficulties, refer to the INHALATION section. Call an ambulance for transportation to hospital. For additional advice, call the medical emergency number on this safety data sheet or your poison center or doctor.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Corrosive to eyes. Direct contact with the eyes can cause irreversible damage, including blindness. Serious effects may be delayed following exposure.
- Inhalation** : Harmful if inhaled. Serious effects may be delayed following exposure.
- Skin contact** : Causes severe burns. Harmful in contact with skin. Serious effects may be delayed following exposure.
- Ingestion** : Harmful if swallowed. Corrosive to the digestive tract. May cause acute or chronic fluorosis. Serious effects may be delayed following exposure.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
Cornea opacity
- Inhalation** : Adverse symptoms may include the following:
irritation
coughing
shortness of breath/breathing difficulty

Section 4. First-aid measures

- Skin contact** : Adverse effects may be delayed up to 24 hours after exposure. Adverse symptoms may include the following:
pain
redness
blistering of the skin
- Ingestion** : Adverse symptoms may include the following:
throat and stomach pain
nausea or vomiting

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Serious effects may be delayed following exposure. The exposed person may need to be kept under medical surveillance for 48 hours. Hyperkalemia, hyperphosphatemia, hypomagnesemia, or hypocalcemia may occur from acute oral ingestion or dermal burns to 1% of the body surface area or greater. For systemic poisoning, serum electrolytes including calcium and magnesium, and renal function should be monitored. Systemic hypocalcemia and hypomagnesemia may cause cardiac dysrhythmias and cardiovascular collapse. Administer sufficient calcium and magnesium to maintain serum concentrations in the high-normal range. Dermal contact may be treated by calcium gluconate topical gel, or subcutaneous or intra-arterial injection. Nebulized calcium gluconate has been used for treatment of pulmonary injury. Specific procedures are required.
- Specific treatments** : **If specific treatments for hydrofluoric acid exposure are readily available, follow first aid instructions on packaging.** Treatments may include creams, gels, solutions, sprays, eye wash bottles and portable showers.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Decontamination measures may be necessary. Personnel and equipment must be checked and decontaminated prior to leaving the area.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Non-flammable. Material will not burn. Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : Do not use water jet. Do not direct water at spill or source. Will react with water or steam to produce heat and toxic fumes.

- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst. Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air.

- Hazardous thermal decomposition products** : Emits highly corrosive fumes when heated to decomposition. Emits toxic fumes when heated to decomposition.

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contain and collect the water used to fight the fire for later treatment and disposal.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 5. Fire-fighting measures

Remark : Do not release runoff from fire to drains or watercourses.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : Refer to Emergency Response Guidebook, Guide 154 for further information regarding spill control and Isolation/Protective Action Distances Guidelines. If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused adverse impacts (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Immediately contact emergency personnel. Only trained and qualified personnel are to participate in clean-up of spills. Follow company's spill procedures. Keep people away from spill. Put on appropriate personal protective equipment (see section 8).

Large spill : Immediately contact emergency personnel. Follow company's spill procedures. Keep people away from spill. Put on appropriate personal protective equipment (see section 8). Only trained and qualified personnel are to participate in clean-up of spills. Ensure procedures and training for emergency decontamination and disposal are in place.

Approach release from upwind. Stop leak if without risk. Do not use a vacuum truck to transfer this material. Dike spill area and do not allow product to reach sewage system or surface or ground water. Notify any reportable spill to authorities. (See section 12 for environmental risks and 13 for disposal information.) The spilled material may be neutralized with calcium carbonate or crushed limestone. Use water spray curtain to divert vapor drift. Do not allow any potentially contaminated water, including rain water, runoff from fire fighting or spills, to enter any waterway, sewer or drain. Use appropriate equipment to put the spilled material in a waste disposal container.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not ingest. Do not breathe vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store and use in accordance with all applicable regulations and company requirements. Workers must be trained in the safe handling and use of this product. Store in a segregated and approved area. Separate from alkalis. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Store locked up. Keep container tightly closed and sealed until ready for use. Incompatible with: Glass. Concrete. Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Contact your sales representative or a metallurgical specialist to ensure compatibility with your equipment. Refer to NFPA 400 Hazardous Materials Code for further information on the safe storage and handling of hazardous materials.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits |
|--------------------|--|
| fluorosilicic acid | <p>ACGIH TLV (United States, 3/2020). TWA: 2.5 mg/m³, (as F) 8 hours.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 2.5 mg/m³, (as F) 8 hours.</p> <p>OSHA PEL (United States, 5/2018). TWA: 2.5 mg/m³, (as F) 8 hours.</p> <p>OSHA PEL Z2 (United States, 2/2013). TWA: 2.5 mg/m³ 8 hours. Form: Dust</p> <p>CA Alberta Provincial: (Canada, 6/2018). 8 hrs OEL: 2.5 mg/m³, (as F) 8 hours.</p> <p>British Columbia Provincial: (Canada, 1/2020). TWA: 2.5 mg/m³, (as F) 8 hours.</p> <p>CA Ontario Provincial (Canada, 6/2019). TWA: 2.5 mg/m³, (as F) 8 hours.</p> <p>CA Quebec Provincial. (Canada, 7/2019). TWA/EV: 2.5 mg/m³, (as F) 8 hours.</p> |

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Contact your personal protective equipment manufacturer to verify the compatibility of the equipment for the intended purpose.

General information : Do not handle until all safety precautions have been read and understood.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. Specific treatment is required urgently.

Section 8. Exposure controls/personal protection

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. Recommended: butyl rubber, neoprene rubber, Viton® or Viton®/butyl rubber. Not recommended: disposable nitrile gloves.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: Chemical-resistant protective suit. Fully-encapsulating, vapor-protective clothing should be worn for spills and leaks without fire.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: Impervious rubber safety boots.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- For U.S. work sites where respiratory protection is required, ensure that a respiratory protection program meeting 29 CFR 1910.134 requirements is in place.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Liquid. [Clear sparkling liquid.]
- Color** : Colorless to light yellow.
- Odor** : Pungent.
- Odor threshold** : Not available.
- pH** : 1.5 to 2 [Conc. (% w/w): 10%]
- Melting point/freezing point** : -20 to -18°C (-4 to -0.4°F)
- Boiling point, initial boiling point, and boiling range** : 136 to 163°C (276.8 to 325.4°F) [Estimated.]
- Flash point** : [Product does not sustain combustion.]
- Evaporation rate** : Not available.
- Flammability** : Not available.
- Lower and upper explosion limit/flammability limit** : Not available.

Section 9. Physical and chemical properties and safety characteristics

| | |
|---|--|
| Vapor pressure | : 2.3 kPa (17.26 mm Hg) |
| Relative vapor density | : Not available. |
| Relative density | : 1.23 |
| Solubility | : Easily soluble in the following materials: cold water and hot water. |
| Solubility in water | : Miscible in water. |
| Partition coefficient: n-octanol/water | : Not applicable. |
| Auto-ignition temperature | : Not available. |
| Decomposition temperature | : 108°C (226.4°F) |
| Viscosity | : Not available. |
| Particle characteristics | |
| Median particle size | : Not applicable. |

Section 10. Stability and reactivity

| | |
|---|--|
| Reactivity | : Reacts violently with bases. May react vigorously with water. Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. |
| Chemical stability | : The product is stable. |
| Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur. |
| Conditions to avoid | : Keep away from incompatible materials. ALWAYS ADD ACID TO WATER or other diluent. |
| Incompatible materials | : Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Reactive or incompatible with the following materials: alkalis metals glass Contact your sales representative or a metallurgical specialist to ensure compatibility with your equipment. |
| Hazardous decomposition products | : Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|-------------------------|-----------|---------|-----------|----------|
| water | LD50 Oral | Rat | >90 g/kg | - |
| fluorosilicic acid | LD50 Oral | Rat | 430 mg/kg | - |

Conclusion/Summary : Harmful if swallowed or if inhaled. Harmful in contact with skin. May cause acute or chronic fluorosis.

Irritation/Corrosion

Section 11. Toxicological information

Not available.

Conclusion/Summary

- Skin** : Causes severe burns. Serious effects may be delayed following exposure.
- Eyes** : Causes serious eye damage. Direct contact with the eyes can cause irreversible damage, including blindness.
- Respiratory** : Corrosive to the respiratory tract.

Sensitization

Not available.

Conclusion/Summary

- Skin** : No known significant effects or critical hazards.
- Respiratory** : No known significant effects or critical hazards.

Mutagenicity

Not available.

- Conclusion/Summary** : No known significant effects or critical hazards.

Carcinogenicity

Not available.

- Conclusion/Summary** : No known significant effects or critical hazards.

Classification

| Product/ingredient name | IARC | NTP | ACGIH |
|-------------------------|------|-----|-------|
| fluorosilicic acid | - | - | A4 |

Reproductive toxicity

Not available.

- Conclusion/Summary** : No known significant effects or critical hazards.

Teratogenicity

Not available.

- Conclusion/Summary** : No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

- Eye contact** : Corrosive to eyes. Direct contact with the eyes can cause irreversible damage, including blindness. Serious effects may be delayed following exposure.
- Inhalation** : Harmful if inhaled. Serious effects may be delayed following exposure.
- Skin contact** : Causes severe burns. Harmful in contact with skin. Serious effects may be delayed following exposure.

Section 11. Toxicological information

Ingestion : Harmful if swallowed. Corrosive to the digestive tract. May cause acute or chronic fluorosis. Serious effects may be delayed following exposure.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain
watering
redness
Cornea opacity

Inhalation : Adverse symptoms may include the following:
irritation
coughing
shortness of breath/breathing difficulty

Skin contact : Adverse effects may be delayed up to 24 hours after exposure. Adverse symptoms may include the following:
pain
redness
blistering of the skin

Ingestion : Adverse symptoms may include the following:
throat and stomach pain
nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : See above.

Potential delayed effects : See below.

Long term exposure

Potential immediate effects : See above.

Potential delayed effects : See below.

Potential chronic health effects

Not available.

Conclusion/Summary : Adverse effects are typically the result of acute overexposure. These effects may be long term or permanent in nature. Overexposure may cause skeletal fluorosis.

General : Repeated or prolonged overexposure may result in chronic health effects.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapors) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|------------------------------------|--------------|----------------|--------------------------|----------------------------|-------------------------------------|
| HYDROFLUOROSILICIC ACID (23 - 26%) | 500 | 1100 | N/A | 11 | N/A |

Other information : Not available.

Section 12. Ecological information

Toxicity

Not available.

Conclusion/Summary : Based on available data, the classification criteria are not met. May be harmful to the environment if released in large quantities.

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil





Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

| | TDG | DOT | IMDG | IATA |
|-----------------------------------|--|--|---|--|
| UN number | UN1778 | UN1778 | UN1778 | UN1778 |
| UN proper shipping name | FLUOROSILICIC ACID | FLUOROSILICIC ACID | FLUOROSILICIC ACID | Fluorosilicic acid |
| Transport hazard class(es) | 8  | 8  | 8  | 8  |
| Packing group | II | II | II | II |
| Marine pollutant | No. | No. | No. | No. |

Additional information

TDG : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.40-2.42 (Class 8).

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 14. Transport information

Section 15. Regulatory information

Canadian lists

- Canadian NPRI** : None of the components are listed.
CEPA Toxic substances : The following components are listed: inorganic fluorides

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

- Australia** : All components are listed or exempted.
Canada : All components are listed or exempted.
China : All components are listed or exempted.
Europe : All components are listed or exempted.
Japan : **Japan inventory (CSCL)**: All components are listed or exempted.
Japan inventory (ISHL): Not determined.
New Zealand : All components are listed or exempted.
Philippines : All components are listed or exempted.
Republic of Korea : All components are listed or exempted.
Taiwan : All components are listed or exempted.
Thailand : All components are listed or exempted.
Turkey : Not determined.
United States : All components are active or exempted.
Viet Nam : All components are listed or exempted.
U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

Section 15. Regulatory information

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 311/312

Classification : CORROSIVE TO METALS - Category 1
 ACUTE TOXICITY (oral) - Category 4
 ACUTE TOXICITY (dermal) - Category 4
 ACUTE TOXICITY (inhalation) - Category 4
 SKIN CORROSION - Category 1B
 SERIOUS EYE DAMAGE - Category 1

Composition/information on ingredients

| Name | % | Classification |
|--------------------|---------|---|
| fluorosilicic acid | 23 - 26 | SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 |

State regulations

Massachusetts : The following components are listed: HYDROFLUOSILICIC ACID

New York : None of the components are listed.

New Jersey : The following components are listed: SILICOFLUORIC ACID; SILICATE(2-), HEXAFLUORO-, DIHYDROGEN; SAND ACID; HYDROFLUOROSILICIC ACID; FLUOROSILICIC ACID

Pennsylvania : None of the components are listed.

California Prop. 65

This product, as manufactured, does NOT contain any substance in concentrations known to the state of California to cause cancer, birth defects or other reproductive harm. Nutrien cannot guarantee the downstream compliance of any product once out of Nutrien custody.

Section 16. Other information

History

Date of issue/Date of revision : 5/17/2022

Date of previous issue : 3/31/2021

Version : 2.2

Key to abbreviations : ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 HPR = Hazardous Products Regulations
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 N/A = Not available
 SGG = Segregation Group
 UN = United Nations

Procedure used to derive the classification

Section 16. Other information

| Classification | Justification |
|---|---|
| CORROSIVE TO METALS - Category 1 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 | Weight of evidence Weight of evidence Weight of evidence Weight of evidence Weight of evidence On basis of test data |

✔ Indicates information that has changed from previously issued version.

Notice to reader

Supply chain partners must ensure they pass this SDS, and all other relevant safety information to their customers.

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