

Hydrofluorosilicic Acid

Section 1. Identification

Product identifier : Hydrofluorosilicic Acid
Chemical name : Fluorosilicic acid
SDS # : 217
Other means of identification
Synonyms : Fluorosilicic acid, Fluosilicic acid, Hydrofluorosilicic acid
Product code(s) : **HFSA**
Product type : Liquid.

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

Identified uses Water Treatment Chemicals. Manufacture of inorganic products. Additives, Process Chemicals and Raw Materials	
Uses advised against Reserved for industrial and professional use only.	Reason Risk assessment.

Supplier's details : PCS Sales (USA), Inc. (A Subsidiary of Nutrien Ltd.)
1101 Skokie Blvd.
Suite 400
Northbrook, IL 60062

PCS Sales (Canada), Inc. (A Subsidiary of Nutrien Ltd.)
Suite 500
122 1st Avenue South
Saskatoon, Saskatchewan Canada S7K 7G3

Company phone number (North America):
1-800-524-0132 (Customer Service)

sds@nutrien.com - www.nutrien.com

Emergency telephone number (with hours of operation) : Nutrien North American
24 HOUR EMERGENCY TELEPHONE NUMBERS:

English:
Transportation Emergencies: 1-800-792-8311
Medical Emergencies: 1-303-389-1653

French or Spanish:
Transportation or Medical Emergencies: 1-303-389-1654

Section 2. Hazard identification

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

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

GHS label elements

Section 2. Hazard identification

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

: Not applicable.

Prevention

: Wear protective gloves. Wear protective clothing. Wear 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
 hands thoroughly after handling.

Response

: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 Immediately call a POISON CENTER or physician.
 IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth.
 Do NOT induce vomiting.
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin
 with water. Wash contaminated clothing before reuse. Immediately call a POISON
 CENTER or physician.
 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 physician.
 Absorb spillage to prevent material damage.

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.

Supplemental label elements

: None known.

Other hazards which do not result in classification

: None known.

Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

Ingredient name	% (w/w)	CAS number
Water	76 - 77	7732-18-5
Fluorosilicic acid	23 - 24	16961-83-4

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment 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, due to the chemical reaction that occurs - see Notes to Physician below. 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

Section 4. First-aid measures

- number on this safety data sheet or your poison center or doctor.
- Inhalation** : CORROSIVE. If gases, mists or vapors exceed the IDLH or are present in unknown concentrations, rescuers must wear self-contained breathing apparatus and a suit resistant to gases (EPA Level B).
REMOVE PERSON TO FRESH AIR. Watch closely for signs of wheezing and breathing difficulties. Maintain an open airway. If not breathing, begin CPR. 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. Symptoms may be delayed after exposure. The exposed person may need to be kept under medical surveillance for 24 - 48 hours. Call an ambulance for transport to hospital. For additional advice call the medical emergency number on this SDS or your poison center or doctor.
- 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.
- 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 milk or 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** : Causes serious eye damage.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation.
- Skin contact** : Causes severe burns.
- Ingestion** : Harmful if swallowed.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Ingestion** : Corrosive to the digestive tract. May cause acute or chronic fluorosis. Aspiration hazard if swallowed. Can enter lungs and cause damage. Adverse symptoms may include the following:
throat and stomach pain
nausea or vomiting
wheezing and breathing difficulties

Section 4. First-aid measures

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

- Notes to physician** : If breathing is difficult, administer oxygen. Provide assisted ventilation as required. Contact with the skin or eyes at high pressures may result in injuries. Outcomes can be improved by minimizing time to decontamination and extending decontamination times to reduce tissue damage. Expert opinion indicates extended decontamination is required to remove corrosive chemicals. Skin and eye decontamination should be performed for a minimum of 20 - 30 minutes. Extended decontamination times may be required depending on the exposure. To avoid hypothermia, irrigation water should be maintained at a comfortable temperature. If the patient is not in extremis, it may be necessary to delay transport to emergency care facilities to ensure adequate decontamination time. However, early patient transport may be necessary depending on patient's condition or the availability of water. If possible, continue skin and/or eye irrigation during emergency medical transport. Double-bag contaminated clothing and personal belongings of the patient.
- Specific treatments** : 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. Topical calcium gluconate gel with infusion of calcium gluconate solution are advised for dermal burns. Observation may be warranted. Pulmonary edema or electrolyte imbalance may occur several hours after exposure. Contact Nutrien's 24 Hr Medical Emergency telephone number for professional support: English: 1-303-389-1653; French or Spanish: 1-303-389-1654
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. Depending on the situation, the rescuer should wear an appropriate mask, gloves, protective clothing and a respirator or self-contained breathing apparatus. Mouth-to-mouth resuscitation of oral exposure patients is not recommended. First-aiders with contaminated clothing should be properly decontaminated.

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** : None known.

Specific hazards arising from the chemical

- : In a fire or if heated, a pressure increase will occur and the container may burst. In a fire, hazardous decomposition products may be produced. Emits highly corrosive fumes when heated to decomposition. Emits toxic fumes when heated to decomposition.

Hazardous thermal decomposition products

- : Decomposition products may include the following materials:
acidic corrosive material

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.

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.

Remark

- : Contain and collect the water used to fight the fire for later treatment and disposal. Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Take off contaminated clothing and wash it before reuse.

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** : 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". Refer to Emergency Response Guidebook, Guide 154 for further information regarding spill control and Isolation/Protective Action Distances Guidelines.

- 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** : Put on appropriate personal protective equipment (see Section 8). Stop leak if without risk. Move containers from spill area. The spilled material may be neutralized with calcium carbonate, crushed limestone, or sodium carbonate. Use appropriate equipment to put the spilled material in a waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Only trained and qualified personnel are to participate in clean-up of spills. Put on appropriate personal protective equipment (see Section 8). Approach release from upwind. Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Contain and absorb using earth, sand or other inert material. Contaminated absorbent material may pose the same hazard as the spilled product. The spilled material may be neutralized with calcium carbonate, crushed limestone, or sodium carbonate. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

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 breathe vapor or mist. Do not ingest. 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.

- 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.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Flammable concentrations of vapor may accumulate in the headspace of containers. Contact your sales representative or a metallurgical specialist to ensure compatibility with your equipment. Store locked up. Separate from alkalis. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental

Section 7. Handling and storage

contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Canadian Regulations: Fluorosilicic acid	CA Alberta Provincial: (Canada, 4/2009). 8 hrs OEL: 2.5 mg/m ³ , (as F) 8 hours. British Columbia Provincial: (Canada, 4/2014). TWA: 2.5 mg/m ³ , (as F) 8 hours. CA Ontario Provincial (Canada, 1/2013). TWA: 2.5 mg/m ³ , (as F) 8 hours. CA Quebec Provincial. (Canada, 1/2014). TWAEV: 2.5 mg/m ³ , (as F) 8 hours.
U.S. Federal Regulations: Fluorosilicic acid	ACGIH TLV (United States, 4/2014). TWA: 2.5 mg/m ³ , (as F) 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 2.5 mg/m ³ , (as F) 8 hours. OSHA PEL (United States, 2/2013). TWA: 2.5 mg/m ³ , (as F) 8 hours. OSHA PEL Z2 (United States, 2/2013). TWA: 2.5 mg/m ³ 8 hours. Form: Dust
Water	None.

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, 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

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.

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. Recommended: butyl rubber
 Contact your personal protective equipment manufacturer to verify the compatibility

Section 8. Exposure controls/personal protection

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

Section 9. Physical and chemical properties

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** : -20 to -18°C (0 to -4°F)
- Boiling point** : 136 to 163°C (276.8 to 325.4°F)
- Flash point** : Not applicable.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Non-flammable. Material will not burn. Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Flammable concentrations of hydrogen may accumulate in the headspace of containers.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : 2.3 kPa (17.26 mm Hg) [room temperature]
- Vapor density** : Not available.
- Relative density** : 1.23
- Solubility** : Easily soluble in the following materials: cold water and hot water.
- Solubility in water** : Soluble
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not applicable.
- Decomposition temperature** : 108°C (226.4°F)
- Viscosity** : Not available.

Section 10. Stability and reactivity

- Reactivity** : May react vigorously with water. Reacts violently with bases. Reactive or incompatible with the following materials:
oxidizing agents
chlorine-based bleaching agents
metals or alloys
glass
- Chemical stability** : The product is stable.

Section 10. Stability and reactivity

- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Contact with incompatible substances. Elevated temperature: 108°C
- Incompatible materials** : See above. 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.
- 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
Fluorosilicic acid	LD50 Oral LC50 Inhalation Gas.	Rat Rat	430 mg/kg 621 ppm As HF	- 1Hr exposure adjusted to 4 hr equivalent

Conclusion/Summary : Harmful by inhalation, in contact with skin and if swallowed.

Irritation/Corrosion

Not available.

Conclusion/Summary

- Skin** : Corrosive to the skin.
- Eyes** : Corrosive to eyes.
- 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.

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.

Section 11. Toxicological information

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Inhalation
Ingestion
Dermal

Potential acute health effects

Eye contact : Causes serious eye damage.
Inhalation : Harmful if inhaled. May cause respiratory irritation.
Skin contact : Causes severe burns.
Ingestion : Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

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

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Corrosive to the digestive tract. May cause acute or chronic fluorosis. Aspiration hazard if swallowed. Can enter lungs and cause damage. Adverse symptoms may include the following:
throat and stomach pain
nausea or vomiting
wheezing and breathing difficulties

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

Short term exposure

Potential immediate effects : Corrosive to the eyes, skin, respiratory system and digestive tract.
Potential delayed effects : May cause acute or chronic fluorosis.

Long term exposure

Potential immediate effects : See above.
Potential delayed effects : See below.

Potential chronic health effects

Conclusion/Summary : Overexposure may cause skeletal fluorosis.
General : Adverse effects are typically the result of acute overexposure. These effects may be long term or permanent in nature. 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.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.

Section 11. Toxicological information

Fertility effects : No known significant effects or critical hazards.

Section 12. Ecological information

Toxicity

Not available.

Conclusion/Summary : 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. 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 Classification	DOT Classification	Mexico Classification	IMDG	IATA
UN number	UN1778	UN1778	UN1778	UN1778	UN1778
UN proper shipping name	Fluosilicic acid solution	Fluosilicic acid solution	Fluosilicic acid solution	Fluosilicic acid solution	Fluosilicic acid solution
Transport hazard class(es)	8 	8 	8 	8 	8 
Packing group	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	No.

Section 14. Transport information

Additional information	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.40-2.42 (Class 8). <u>Explosive Limit and Limited Quantity Index 1 Passenger Carrying Road or Rail Index 1</u>	<u>Packaging instruction</u> Exceptions: None. Non-bulk: 202. Bulk: 242. <u>Quantity limitation</u> Passenger aircraft/rail: 1 L. Cargo aircraft: 30 L. <u>Special provisions</u> A7, B2, B15, IB2, N3, N34, T8, TP2	<u>Special provisions</u> P001, IBC02, T8, TP2	<u>Emergency schedules</u> F-A, S-B <u>Special provisions</u> P001, IBC02, B20, T8, TP2	-
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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.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : The following components are listed: Inorganic fluorides

Canada inventory : All components are listed or exempted.

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.

China : All components are listed or exempted.

Europe : All components are listed or exempted.

Japan : **Japan inventory (ENCS):** All components are listed or exempted.
Japan inventory (ISHL): Not determined.

Malaysia : 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.

Section 15. Regulatory information

Taiwan : All components are listed or exempted.
Turkey : Not determined.

U.S. Federal Regulations: : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
TSCA 8(b) Active inventory: All components are listed or exempted.

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

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304 Composition/information on ingredients

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard.
Fluorosilicic acid	≥10 - ≤25	No.	No.	No.	Yes.	No.

State regulations

Massachusetts : The following components are listed: Hydrofluorosilicic Acid

New York : None of the components are listed.

New Jersey : The following components are listed: Silicofluoric 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 : 6/5/2019

Date of previous issue : 4/30/2015

Version : 2

✔ Indicates information that has changed from previously issued version.
 General format change.

Section 16. Other information

Key to abbreviations

- : ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- 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)
- UN = United Nations
- HPR = Hazardous Products Regulations

Procedure used to derive the classification

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

References

- : Transportation of Dangerous Goods Act and Clear Language Regulations, current edition at time of SDS preparation, Transport Canada;
- Hazardous Products Act and Regulations, current revision at time of SDS preparation, Health Canada;
- Domestic Substances List, current revision at time of SDS preparation, Environment Canada;
- 29 CFR Part 1910, current revision at time of SDS preparation, U.S. Occupational Safety and Health Administration;
- 40 CFR Parts 1-799, current revision at time of SDS preparation, U.S. Environmental Protection Agency;
- 49 CFR Parts 1-199, current revision at time of SDS preparation, U.S. Department of Transport;
- Mexican Official Standard NOM-018-STPS-2015, Harmonised System for the Identification and Communication of Hazards and Risks by Hazardous Chemicals in the Workplace;
- NORMA Oficial Mexicana NOM-010-STPS-2014, Agentes químicos contaminantes del ambiente laboral-Reconocimiento, evaluación y control.
- Mexican Official Standard NOM-002-SCT / 2011, List of the most commonly transported hazardous substances and materials;
- Threshold Limit Values for Chemical Substances, current edition at time of SDS preparation, American Conference of Governmental Industrial Hygienists;
- NFPA 400, National Fire Codes, National Fire Protection Association, current edition at time of SDS preparation;
- NFPA 704, National Fire Codes, National Fire Protection Association, current edition at time of SDS preparation;
- Corrosion Data Survey, Sixth Edition, 1985, National Association of Corrosion Engineers;
- ERG 2016, Emergency Response Guidebook, U.S. Department of Transport, Transport Canada, and the Secretariat of Transportation and Communications of Mexico
- Hazardous Substances Data Bank, current revision at time of SDS preparation, National Library of Medicine, Bethesda, Maryland
- Integrated Risk Information System, current revision at time of SDS preparation, U.S. Environmental Protection Agency, Washington, D.C.
- Pocket Guide to Chemical Hazards, current revision at time of SDS preparation, National Institute for Occupational Safety and Health, Cincinnati, Ohio ;
- Agency for Toxic Substances and Disease Registry Databank, current revision at time of SDS preparation, U.S. Department of Health and Human Services, Atlanta, Georgia
- National Toxicology Program, Report on Carcinogens, Division of the National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina.

Section 16. Other information

Registry of Toxic Effects of Chemical Substances. National Institute for Occupational Safety and Health, Cincinnati, Ohio
California Code of Regulations, Title 27, Div 4, Chapter 1, Proposition 65 Aug 30, 2018 rev and current updates

[Notice to reader](#)

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