

FLUOROSILICIC ACID, 23-25%

Revision Date 06/14/2018

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

- Trade name FLUOROSILICIC ACID, 23-25%
- Synonyms Hydrofluorosilicic acid, Fluorosilicic acid, Hydrofluosilicic acid, Flousilicic acid, HFS, FSA

1.2 Relevant identified uses of the substance or mixture and uses advised against**Uses of the Substance / Mixture**

- Chemical intermediate
- Water treatment

1.3 Details of the supplier of the safety data sheet**Company**

SOLVAY FLUORIDES, LLC
3737 Buffalo Speedway,
Suite 800,
Houston, TX 77098
USA
Tel: 800-515-6065

1.4 Emergency telephone

FOR EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CONTACT CHEMTREC (24-Hour Number): 800-424-9300 within the United States and Canada, or 703-527-3887 for international collect calls.

SECTION 2: Hazards identification

Although WHMIS has not adopted the environmental portion of the GHS regulations, this document may include information on environmental effects

2.1 Classification of the substance or mixture**Hazardous Products Regulations (WHMIS 2015)**

Acute toxicity, Category 4
Acute toxicity, Category 3
Skin corrosion, Category 1B
Serious eye damage, Category 1

H302: Harmful if swallowed.
H311: Toxic in contact with skin.
H314: Causes severe skin burns and eye damage.
H318: Causes serious eye damage.

2.2 Label elements**Hazardous Products Regulations (WHMIS 2015)****Pictogram****Signal Word**

- Danger

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Hazard Statements

- H302 Harmful if swallowed.
- H311 Toxic in contact with skin.
- H314 Causes severe skin burns and eye damage.

Precautionary StatementsPrevention

- P264 Wash skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

- P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
- P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
- P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
- P305 + P351 + P338 + P310 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/doctor. Take off immediately all contaminated clothing and wash it before reuse.
- P361 + P364 Take off immediately all contaminated clothing and wash it before reuse.

Storage

- P405 Store locked up.

Disposal

- P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards which do not result in classification

- Hazardous decomposition products formed under fire conditions.
- Corrosive
- Harmful by inhalation, in contact with skin and if swallowed.

SECTION 3: Composition/information on ingredients**3.1 Substance**

- Not applicable, this product is a mixture.

3.2 Mixture

- Synonyms Hydrofluorosilicic acid, Fluorosilicic acid, Hydrofluosilicic acid, Flousilicic acid, HFS, FSA

WHMIS Hazardous Ingredients and Impurities

Chemical name	Identification number CAS-No.	Concentration [% wt/wt or V/V]
Silicate(2-), hexafluoro-, hydrogen (1:2)	16961-83-4	>= 23 - < 25
Hydrofluoric acid	7664-39-3	< 1

SECTION 4: First aid measures**4.1 Description of first-aid measures**

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General advice

- HF exposures are unique. Serious and potentially life threatening effects can occur immediately or up to 24 hours after exposure.
- Always decontaminate exposure victims before applying first aid or medical treatment.
- Rescuers should wear PPE during rescue and decontamination of victims.
- First aid providers should wear gloves when touching exposed areas or applying calcium gluconate gel to victims.
- In case of splashes to eyes and face, treat eyes first.
- Always seek medical attention if exposed to HF.

In case of inhalation

- Move to fresh air.
- Get immediate medical advice/ attention.
- Administer oxygen by mask at a rate of 12 liters/minute.
- Nebulize 2.5% calcium gluconate solution for 15 to 20 minutes minimum or until the victim reaches medical attention.
- If calcium gluconate is not available, administer oxygen as above until the victim reaches medical attention.
- If respiratory assistance is needed, use indirect methods such as "microshields" or "AMBU" bag. Do not give mouth to mouth resuscitation.
-
- If exposed to HF vapor, expect to see skin and eye exposure. Follow the decontamination and first aid procedures for skin and eye exposure.
- Be aware to maintain life support if necessary.

In case of skin contact

- In case of HF exposure to skin, go to the nearest source of water or safety shower. Turn water on.
- While washing, remove all clothing, shoes and jewelry.
- Finally, while closing eyes and facing the water flow, remove goggles or respirator face mask.
- HF-resistant gloves should be worn while touching contaminated skin.
- Wash the exposed areas for 5 minutes maximum if first aid treatments are immediately available. Otherwise continue to wash until first aid treatments are available.
- Immediately apply calcium gluconate gel 2.5% and massage into the affected area; continue to massage while repeatedly applying gel until 15 minutes after pain is relieved.
- If fingers/finger nails are touched, even if there is no pain, dip them in a bath of 2.5% calcium gluconate for 15 to 20 minutes.
- Seek medical attention as soon as possible. During transportation to a medical facility or while waiting for a physician to see victim, it is extremely important to continue massaging calcium gluconate gel.
- Be aware to maintain life support if necessary.

In case of eye contact

- Decontamination: Go to the nearest eye wash or clean source of water, open the water valve. Have a trained person remove contact lenses if present (contact lenses should be prohibited), put your eye(s) in the water flow and hold eyelids open while flushing.
- After flushing, irrigate eyes with 1% calcium gluconate solution using a nasal cannula cinched over the bridge of the nose. Dispense 1000 cc of calcium gluconate solution in a continuous flush for a minimum period of 15 minutes, or if necessary until medical aid is available.
-
- During transportation to a medical facility or while waiting for a physician to see the victim, it is extremely important to continue the calcium gluconate irrigation.
-
- Always obtain specialized medical evaluation & treatment as soon as possible.
- Be aware to maintain life support if necessary.

In case of ingestion

- If HF has been ingested, the victim should be immediately transported to a medical facility.
- Do NOT induce vomiting.
- If the victim is able to swallow, give oral calcium containing antacids or solution. The recommended antidote is

calcium gluconate. However, if no calcium gluconate is at hand, the oral administration of small and limited amount of milk or water might be considered if it's consistent with local practice.

- Be aware to maintain life support if necessary.

4.2 Most important symptoms and effects, both acute and delayed

In case of skin contact

Symptoms

- Causes severe burns.
- metabolic imbalances
- Life threatening cardiac arrhythmia

Effects

- HF penetrate very fast any tissue It comes in contact with, and do not remain on its surface.
- Initially, the substances will be locally burning, and afterwards they will penetrate into deeper tissues and might cause the following significant complications:
- In case of lower concentrations, symptoms can be delayed and might appear even 48h after the exposure.
- It is completely absorbed into the body, where it causes acute and severe toxic systemic effects, mainly attributable to a rapid development of serum hypocalcaemia and hypomagnesaemia and to enzymes blocking.

In case of eye contact

Symptoms

- Causes severe burns.
- Blindness

Effects

- HF penetrate very fast any tissue It comes in contact with, and do not remain on its surface.
- Initially, the substances will be locally burning, and afterwards they will penetrate into deeper tissues and might cause the following significant complications:
- In case of lower concentrations, symptoms can be delayed and might appear even 48h after the exposure.
- It is completely absorbed into the body, where it causes acute and severe toxic systemic effects, mainly attributable to a rapid development of serum hypocalcaemia and hypomagnesaemia and to enzymes blocking.

In case of inhalation

Symptoms

- Causes severe burns.
- metabolic imbalances
- pulmonary edema
- Life threatening cardiac arrhythmia

Effects

- Initially, the substances will be locally burning, and afterwards they will penetrate into deeper tissues and might cause the following significant complications:
- In case of lower concentrations, symptoms can be delayed and might appear even 48h after the exposure.
- It is completely absorbed into the body, where it causes acute and severe toxic systemic effects, mainly attributable to a rapid development of serum hypocalcaemia and hypomagnesaemia and to enzymes blocking.

In case of ingestion

Effects

- In case of lower concentrations, symptoms can be delayed and might appear even 48h after the exposure.
- It is completely absorbed into the body, where it causes acute and severe toxic systemic effects, mainly attributable to a rapid development of serum hypocalcaemia and hypomagnesaemia and to enzymes blocking.

4.3 Indication of any immediate medical attention and special treatment needed

- no data available

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media**

- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

- None.

5.2 Special hazards arising from the substance or mixture**Specific hazards during fire fighting**

- The product is not flammable.
- Not combustible.
- Heating can release hazardous gases.
- Gives off hydrogen by reaction with metals.

Hazardous combustion products:

- Hydrogen
- Hydrogen fluoride

5.3 Advice for firefighters**Special protective equipment for fire-fighters**

- Wear self-contained breathing apparatus and protective suit.
- Fire fighters must wear fire resistant personnel protective equipment.
- Wear chemical resistant oversuit
- Protect intervention team with a water spray as they approach the fire.

Further information

- Cool containers/tanks with water spray.
- Approach from upwind.
- Suppress (knock down) gases/vapors/mists with a water spray jet.
- After the fire, proceed rapidly with cleaning of surfaces exposed to the fumes in order to limit equipment damage.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures****Advice for non-emergency personnel**

- Prevent further leakage or spillage if safe to do so.
- Keep away from incompatible products

Advice for emergency responders

- Approach from upwind.
- Isolate the area.
- Wear self-contained breathing apparatus in confined spaces, in cases where the oxygen level is depleted, or in case of significant emissions.
- Suppress (knock down) gases/vapors/mists with a water spray jet.
- Avoid spraying the leak source.
- Ventilate the area.

6.2 Environmental precautions

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- Should not be released into the environment.
- If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up

- Dam up.
- Soak up with inert absorbent material.
- Prevent product from entering sewage system.
- Dilute with water.
- Contact with water may produce heat release and presents risks of splashing.
- When diluting, always add the product to water. Never add water to the product.
- Neutralize with the following product(s):
 - soda ash
 - lime
- Keep in properly labeled containers.
- Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

- Refer to protective measures listed in sections 7 and 8.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

- Used in closed system
- Handle small quantities under a lab hood.
- Use only in well-ventilated areas.
- Use only equipment and materials which are compatible with the product.
- Preferably transfer by pump or gravity.
- For further information, please contact:
 - Manufacturer, importer, supplier
- Keep away from incompatible products

Hygiene measures

- Ensure that eyewash stations and safety showers are close to the workstation location.
- Take off contaminated clothing and shoes immediately.
- Wash contaminated clothing before re-use.
- May not get in touch with:
 - Leather
- Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

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Technical measures/Storage conditions

- Keep container tightly closed.
- Keep in a cool, well-ventilated place.
- Keep away from heat.
- Keep in a contained area
- Information about special precautions needed for bulk handling is available on request.

- Provide tight electrical equipment well protected against corrosion.
- For personal protection see section 8.

- Keep away from:
- Incompatible products

Packaging material**Suitable material**

- Plastic materials.
- Coated steels.

Unsuitable material

- glass

7.3 Specific end use(s)

- Contact your supplier for additional information

SECTION 8: Exposure controls/personal protection

Introductory Remarks: These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

8.1 Control parameters**Components with workplace occupational exposure limits**

Consult local authorities for acceptable exposure limits.

Ingredients	Value type	Value	Basis
Silicate(2-), hexafluoro-, hydrogen (1:2)	TWA	2.5 mg/m ³	American Conference of Governmental Industrial Hygienists Bone damage, Fluorosis, Substances for which there is a Biological Exposure Index or Indices (see BEI® section), Not classifiable as a human carcinogen, varies Expressed as :Fluorine
Hydrofluoric acid	TWA	0.5 ppm	American Conference of Governmental Industrial Hygienists Upper Respiratory Tract irritation, Lower Respiratory Tract irritation, Eye irritation, Skin irritation, Fluorosis, Substances for which there is a Biological Exposure Index or Indices (see BEI® section), Danger of cutaneous absorption Expressed as :Fluorine
Hydrofluoric acid	C	2 ppm	American Conference of Governmental Industrial Hygienists Upper Respiratory Tract irritation, Lower Respiratory Tract irritation, Eye irritation, Skin irritation, Fluorosis, Substances for which there is a Biological Exposure Index or Indices (see BEI® section), Danger of cutaneous absorption Expressed as :Fluorine

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Biological Exposure Indices

Ingredients	Value type	Value	Basis
Silicate(2-), hexafluoro-, hydrogen (1:2)	BEI	2 mg/l Fluoride Urine Prior to shift (16 hours after exposure ceases)	American Conference of Governmental Industrial Hygienists
Silicate(2-), hexafluoro-, hydrogen (1:2)	BEI	3 mg/l Fluoride Urine End of shift (As soon as possible after exposure ceases)	American Conference of Governmental Industrial Hygienists
Hydrofluoric acid	BEI	2 mg/l Fluoride Urine Prior to shift (16 hours after exposure ceases)	American Conference of Governmental Industrial Hygienists
Hydrofluoric acid	BEI	3 mg/l Fluoride Urine End of shift (As soon as possible after exposure ceases)	American Conference of Governmental Industrial Hygienists

8.2 Exposure controls**Control measures****Engineering measures**

- Provide adequate ventilation.
- Apply technical measures to comply with the occupational exposure limits.

Individual protection measures**Respiratory protection**

- Use respirator when performing operations involving potential exposure to vapor of the product.
- Respirator with a full face mask.
- Respirator with combination filter for vapor/particulate (EN 141)
- In case of decomposition (see section 10), face mask with combined type B-P3 cartridge.
- In the case of dust or aerosol formation use respirator with an approved filter.
- Self-contained breathing apparatus in confined spaces/insufficient oxygen/in case of large uncontrolled emissions/in all circumstances when the mask and cartridge do not give adequate protection.
- Use only respiratory protection that conforms to international/ national standards.
- Use NIOSH approved respiratory protection.
- Self-contained breathing apparatus in case of: 1) large uncontrolled emissions, 2) insufficient oxygen, 3) the mask and cartridge do not give adequate protection.

Hand protection

- Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
- Protective gloves - impervious chemical resistant:

Suitable material

- Copolymer VF2-HFP (fluoroelastomer)

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Eye protection

- Chemical resistant goggles must be worn.
- Face-shield

Skin and body protection

- Impervious clothing
- Do not wear leather shoes.
- If splashes are likely to occur, wear:
 - butyl-rubber
 - Boots

Hygiene measures

- Ensure that eyewash stations and safety showers are close to the workstation location.
- Take off contaminated clothing and shoes immediately.
- Wash contaminated clothing before re-use.
- May not get in touch with:
 - Leather
- Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and chemical properties

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product information phone number in Section 1 for its exact specifications.

9.1 Information on basic physical and chemical properties

<u>Appearance</u>	<u>Physical state:</u> liquid liquid colorless
	<u>Color:</u> colorless
<u>Odor</u>	pungent
<u>Odor Threshold</u>	No data available
<u>pH</u>	1.0 (100 g/l)
<u>Melting point/freezing point</u>	<u>Freezing point:</u> < 4.1 °F (< -15.5 °C)
<u>Initial boiling point and boiling range</u>	<u>Boiling point/boiling range:</u> Thermal decomposition: yes Not applicable
<u>Flash point</u>	Not applicable
<u>Evaporation rate (Butylacetate = 1)</u>	No data available
<u>Flammability (solid, gas)</u>	Not applicable
<u>Flammability (liquids)</u>	The product is not flammable.

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<u>Flammability / Explosive limit</u>	<u>Explosiveness:</u> With certain materials (see section 10).
<u>Autoignition temperature</u>	Not applicable
<u>Vapor pressure</u>	22.50 mmHg (30 hPa) (68 °F (20 °C))
<u>Vapor density</u>	> 1 (68 °F (20 °C))
<u>Density</u>	<u>Bulk density:</u> Not applicable
<u>Relative density</u>	1.27 (68 °F (20 °C)) 30 % solution
<u>Solubility</u>	<u>Water solubility:</u> soluble
<u>Partition coefficient: n-octanol/water</u>	Not applicable
<u>Decomposition temperature</u>	No data available
<u>Viscosity</u>	<u>Viscosity, dynamic :</u> 6.5 mPa.s (68 °F (20 °C)) 30 % solution
<u>Explosive properties</u>	No data available
<u>Oxidizing properties</u>	Not considered as oxidizing.

9.2 Other information

No data available

SECTION 10: Stability and reactivity**10.1 Reactivity**

- Risk of violent reaction.
- Risk of explosion.

10.2 Chemical stability

- Stable under recommended storage conditions.
- Corrosive in contact with metals
- Gives off hydrogen by reaction with metals.
- Risk of violent reaction.
- Risk of explosion.

10.3 Possibility of hazardous reactions

- Reacts violently with water., Corrosive in contact with metals, Gives off hydrogen by reaction with metals.

10.4 Conditions to avoid

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- To avoid thermal decomposition, do not overheat.

10.5 Incompatible materials

- glass
- Strong oxidizing agents
- Metals

10.6 Hazardous decomposition products

- Hydrogen
- Hydrogen fluoride

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity**

Acute oral toxicity study scientifically unjustified

Acute inhalation toxicity study scientifically unjustified

Acute dermal toxicity study scientifically unjustified

Acute toxicity (other routes of administration) No data available

Skin corrosion/irritation Corrosive

Serious eye damage/eye irritation Corrosive

Respiratory or skin sensitization study scientifically unjustified

Mutagenicity**Genotoxicity in vitro**

Silicate(2-), hexafluoro-, hydrogen (1:2) Ames test
Strain: Salmonella typhimurium
with and without metabolic activation

negative
Method: OECD Test Guideline 471

Genotoxicity in vivo

Silicate(2-), hexafluoro-, hydrogen (1:2) Test substance: Sodium fluoride
By analogy
In vivo tests did not show mutagenic effects

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Carcinogenicity

Silicate(2-), hexafluoro-, hydrogen (1:2) By analogy

Rat

Mouse

Oral

Exposure time: Prolonged exposure

NOAEL: 175ppm

Test substance: Sodium fluoride drinking water

No carcinogenic effects have been observed

This product does not contain any ingredient designated as probable or suspected human carcinogens by: ACGIH

Toxicity for reproduction and development**Toxicity to reproduction / fertility**

Silicate(2-), hexafluoro-, hydrogen (1:2) By analogy

Two-generation study - Rat, male and female

Oral

Fertility NOAEL Parent: 10 mg/kg

Fertility NOAEL F1: 10 mg/kg

Test substance, Sodium fluoride, drinking water, The product is not considered to affect fertility.

Developmental Toxicity/Teratogenicity

Silicate(2-), hexafluoro-, hydrogen (1:2) By analogy

Oral

Teratogenicity NOAEL:14mg/kg

Test substance, Sodium fluoride, drinking water, The product is not considered to be toxic for development.

STOT**STOT-single exposure**

The substance or mixture is not classified as specific target organ toxicant, single exposure according to GHS criteria.

STOT-repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure according to GHS criteria.

Inhalation Prolonged exposure - Rat

Test substance: gas

Target Organs: Cardio-vascular system, Nervous system

observed effect

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<u>Experience with human exposure</u>	No data available
<u>Aspiration toxicity</u>	No data available
<u>Further information</u>	Chronic exposure may entail dental or skeletal fluorosis

SECTION 12: Ecological information**12.1 Toxicity****Aquatic Compartment****Acute toxicity to fish**

Silicate(2-), hexafluoro-, hydrogen (1:2) LC50 - 96 h : 50 mg/l - Lepomis macrochirus (Bluegill sunfish)
static test

Fresh water

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Acute toxicity to daphnia and other aquatic invertebrates

Silicate(2-), hexafluoro-, hydrogen (1:2) By analogy

EC50 - 48 h : 26 mg/l - Daphnia magna (Water flea)
static test
Test substance: Sodium fluoride
Fresh water

By analogy

EC50 - 96 h : 10.5 mg/l
static test
Test substance: Sodium fluoride
Marine species
salt water

Toxicity to aquatic plants

Silicate(2-), hexafluoro-, hydrogen (1:2) By analogy

EC50 - 96 h : 43 mg/l - algae
static test
Test substance: Sodium fluoride
Fresh water
Sea water

By analogy

EC50 - 96 h : 81 mg/l - algae
static test
Test substance: Sodium fluoride
Fresh water
Sea water

By analogy

NOEC - 7 Days : 50 mg/l - algae
static test
Test substance: Sodium fluoride
Fresh water
Sea water

Toxicity to microorganisms

No data available

Chronic toxicity to fish

Silicate(2-), hexafluoro-, hydrogen (1:2) By analogy

NOEC: 4 mg/l - 21 Days - Oncorhynchus mykiss (rainbow trout)
static test
Test substance: Sodium fluoride
Fresh water

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Chronic toxicity to daphnia and other aquatic invertebrates

Silicate(2-), hexafluoro-, hydrogen (1:2) By analogy

NOEC: 8.9 mg/l - 21 Days - Daphnia magna (Water flea)
static test
Test substance: Sodium fluoride
Fresh water

12.2 Persistence and degradability**Abiotic degradation**

No data available

Stability in water

Silicate(2-), hexafluoro-, hydrogen (1:2)

Water/soil
ionization/neutralization,
Water/soil
complexation/precipitation of inorganic materials,

**Physical- and photo-chemical
elimination**

No data available

Biodegradation**Biodegradability**

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential**Partition coefficient: n-octanol/water**Silicate(2-), hexafluoro-, hydrogen
(1:2)

Not applicable, inorganic substance

Bioconcentration factor (BCF)

Not applicable

The product may be accumulated in organisms.

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12.4 Mobility in soil

Adsorption potential (Koc)	Water Solubility(ies) Mobility
	Soil/sediments potential adsorption pH fluorides
	Air mobility as solid aerosols

Known distribution to environmental compartments No data available

12.5 Results of PBT and vPvB assessment Not applicable

12.6 Other adverse effects No data available

Remarks No data is available on the product itself., Ecological data therefore refers only to the effects of the decomposition products., Harmful to aquatic organisms., Nevertheless, hazard for the environment is limited due to product properties: , low chronic toxicity., Product fate is highly dependent on environmental conditions: pH, temperature, redox potential, mineral and organic content of the medium ,...

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product Disposal**

- In accordance with local and national regulations.
- Refer to manufacturer/supplier for information on recovery/recycling.

Advice on cleaning and disposal of packaging

- Clean container with water.
- The empty and clean containers are to be reused in conformity with regulations.
- To avoid treatments, as far as possible, use dedicated containers.

SECTION 14: Transport information

Transportation status: IMPORTANT! Statements below provide additional data on listed transport classification. The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

TDG**14.1 UN number**

UN 1778

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14.2 Proper shipping name FLUOROSILICIC ACID

14.3 Transport hazard class 8
Label(s) 8

14.4 Packing group
Packing group II
ERG No 154

14.5 Environmental hazards
Marine pollutant NO

DOT

14.1 UN number UN 1778

14.2 Proper shipping name FLUOROSILICIC ACID

14.3 Transport hazard class 8
Label(s) 8

14.4 Packing group
Packing group II
ERG No 154

14.5 Environmental hazards
Marine pollutant NO

NOM

14.1 UN number UN 1778

14.2 Proper shipping name FLUOROSILICIC ACID

14.3 Transport hazard class 8
Label(s) 8

14.4 Packing group
Packing group II
ERG No 154

14.5 Environmental hazards
Marine pollutant NO

IMDG

14.1 UN number UN 1778

14.2 Proper shipping name FLUOROSILICIC ACID

14.3 Transport hazard class 8
Label(s) 8

14.4 Packing group
Packing group II

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14.5 Environmental hazards NO
Marine pollutant

14.6 Special precautions for user
EmS F-A , S-B

For personal protection see section 8.

IATA

14.1 UN number UN 1778

14.2 Proper shipping name FLUOROSILICIC ACID

14.3 Transport hazard class 8
Label(s): 8

14.4 Packing group II
Packing group

Packing instruction (cargo aircraft) 855
Max net qty / pkg 30.00 L
Packing instruction (passenger aircraft) 851
Max net qty / pkg 1.00 L

14.5 Environmental hazards NO

14.6 Special precautions for user
For personal protection see section 8.

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transportation regulations for hazardous materials, it would be advisable to check their validity with your sales office.

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SECTION 15: Regulatory information**15.1 Notification status**

Inventory Information	Status
United States TSCA Inventory	- Listed on Inventory
Canadian Domestic Substances List (DSL)	- Listed on Inventory
Australia Inventory of Chemical Substances (AICS)	- Listed on Inventory
Japan. CSCL - Inventory of Existing and New Chemical Substances	- Listed on Inventory
Korea. Korean Existing Chemicals Inventory (KECI)	- Listed on Inventory
China. Inventory of Existing Chemical Substances in China (IECSC)	- Listed on Inventory
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	- Listed on Inventory
New Zealand. Inventory of Chemical Substances	- In compliance with the inventory
Mexico INSQ (INSQ)	- In compliance with the inventory
EU. European Registration, Evaluation, Authorisation and Restriction of Chemical (REACH)	- When purchased from a European Solvay legal entity, this product is compliant with the registration provisions of the REACH Regulation (EC) No. 1907/2006 as all its components are either excluded, exempt, pre-registered and/or registered. When purchased from a legal entity outside of Europe, please contact your local representative for additional information.

15.2 National Regulations**Canada. CEPA 1999 Significant New Activity (SNAc) List:**

- No substances are subject to a Significant New Activity Notification.

SECTION 16: Other information**Revision Date:**

06/14/2018

NFPA (National Fire Protection Association) - Classification

Health	3 serious
Flammability	0 minimal
Instability or Reactivity	1 slight
Special Notices	None

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FLUOROSILICIC ACID, 23-25%

Revision Date 06/14/2018

HMIS (Hazardous Materials Identification System (Paint & Coating)) - Classification

Health	3 serious
Flammability	0 minimal
Reactivity	1 slight
PPE	Determined by User; dependent on local conditions

Further information

- Update

Key or legend to abbreviations and acronyms used in the safety data sheet

- C Ceiling limit
- PEL Permissible exposure limit
- STEL Short term exposure limit
- TWA 8-hour, time-weighted average
- ACGIH American Conference of Governmental Industrial Hygienists
- OSHA Occupational Safety and Health Administration
- NTP National Toxicology Program
- IARC International Agency for Research on Cancer
- NIOSH National Institute for Occupational Safety and Health

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. Such information is only given as a guidance to help the user handle, use, process, store, transport, dispose, and release the product in satisfactory safety conditions and is not to be considered as a warranty or quality specification. It should be used in conjunction with technical sheets but do not replace them. Thus, the information only relates to the designated specific product and may not be applicable if such product is used in combination with other materials or in any other manufacturing process, unless otherwise specifically indicated. It does not release the user from ensuring he is in conformity with all regulations linked to its activity.