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----------ISO 9001: 2015----------

MATERIAL SAFETY DATA SHEET

1.Identification
1.1GHS Product identifier
Fluosilicic acid
Code F 1436

2.Hazard identification
2.1Classification of the substance or mixture
Skin corrosion, Category 1B
2.2GHS label elements, including precautionary statements
Pictogram(s)

Signal word	Danger
Hazard statement(s)	H314 Causes severe skin burns and eye damage
Precautionary statement(s)	
Prevention	P260 Do not breathe dust/fume/gas/mist/vapours/spray. P264 Wash ... thoroughly after handling. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Response	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 [or shower]. P363 Wash contaminated clothing before reuse. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P310 Immediately call a POISON CENTER/doctor/\u2026 P321 Specific treatment (see ... on this label). P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Storage	P405 Store locked up.
Disposal	P501 Dispose of contents/container to ...

2.3Other hazards which do not result in classification
none

3.Composition/information on ingredients
3.1Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Hexafluorosilicic acid	Hexafluorosilicic acid	16961-83-4	none	100%

4.First-aid measures
4.1Description of necessary first-aid measures
General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled
Fresh air, rest. Half-upright position. Refer for medical attention.
In case of skin contact
Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer immediately for medical attention.
In case of eye contact
First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
If swallowed
Rinse mouth. Do NOT induce vomiting. Give one or two glasses of water to drink. Refer for medical attention .
4.2Most important symptoms/effects, acute and delayed
Inhalation of vapor produces severe corrosive effect on mucous membrane. Ingestion causes severe burns of mouth and stomach. Contact with liquid or vapor causes severe burns of eyes and skin. (USCG, 1999)

4.3Indication of immediate medical attention and special treatment needed, if necessary
no data available

5.Fire-fighting measures
5.1Extinguishing media
Suitable extinguishing media
Excerpt from ERG Guide 154 [Substances - Toxic and/or Corrosive (Non-Combustible)]: SMALL FIRE: Dry chemical, CO2 or water spray. LARGE FIRE: Dry chemical, CO2, alcohol-resistant foam or water spray. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal; do not scatter the material. FIRE INVOLVING TANKS OR CAR/TRAILER LOADS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Do not get water inside containers. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. (ERG, 2016)
5.2Specific hazards arising from the chemical
Special Hazards of Combustion Products: Irritating fumes of hydrogen fluoride may form in fire. (USCG, 1999)
5.3Special protective actions for fire-fighters
Wear self-contained breathing apparatus for firefighting if necessary.

6.Accidental release measures
6.1Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.
6.2Environmental precautions
Personal protection: complete protective clothing including self-contained breathing apparatus. Collect leaking and spilled liquid in sealable iron containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations. Do NOT let this chemical enter the environment.
6.3Methods and materials for containment and cleaning up
Pick up and arrange disposal. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7.Handling and storage
7.1Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use.Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.
7.2Conditions for safe storage, including any incompatibilities
Separated from strong bases and food and feedstuffs. Well closed.

8.Exposure controls/personal protection
8.1Control parameters
Occupational Exposure limit values
no data available
Biological limit values
no data available
8.2Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
8.3Individual protection measures, such as personal protective equipment (PPE)
Eye/face protection
Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection
Wear impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique(without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
Respiratory protection
Wear dust mask when handling large quantities.
Thermal hazards
no data available

9.Physical and chemical properties

Physical state	colourless liquid
Colour	no data available
Odour	no data available
Melting point/ freezing point	--15.56\u00b0C (USCG, 1999)
Boiling point or initial boiling point and boiling range	108.5\u00baC
Flammability	Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.
Lower and upper explosion limit / flammability limit	no data available
Flash point	108-109\u00baC

Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	in water: miscible
Partition coefficient n-octanol/water (log value)	no data available
Vapour pressure	see Notes
Density and/or relative density	1.22g/mLat 25\u00b0C
Relative vapour density	no data available
Particle characteristics	no data available

10.Stability and reactivity
10.1Reactivity
no data available
10.2Chemical stability
Stable under recommended storage conditions.
10.3Possibility of hazardous reactions
FLUOROSILICIC ACID can react with strong acids (such as sulfuric acid) to release fumes of toxic hydrogen fluoride. Attacks glass and materials containing silica. Reacts exothermically with chemical bases (examples: amines, amides, inorganic hydroxides). Reacts with active metals, including iron and aluminum to dissolve the metal and liberate hydrogen and/or toxic gases. Can initiate polymerization in certain alkenes. Reacts with cyanide salts and compounds to release gaseous hydrogen cyanide. Flammable and/or toxic gases are also often generated by reactions with dithiocarbamates, isocyanates, mercaptans, nitrides, nitriles, sulfides, and weak or strong reducing agents. Additional gas-generating reactions may occur with sulfites, nitrites, thiosulfates (to give H2S and SO3), dithionites (SO2), and carbonates. Can catalyze (increase the rate of) chemical reactions. Decomposes when heated to the boiling point to produce very toxic and corrosive hydrogen fluoride gas.
10.4Conditions to avoid
no data available
10.5Incompatible materials
no data available
10.6Hazardous decomposition products
no data available

11.Toxicological information
Acute toxicity
Oral: no data available
Inhalation: no data available
Dermal: no data available
Skin corrosion/irritation
no data available
Serious eye damage/irritation
no data available
Respiratory or skin sensitization
no data available
Germ cell mutagenicity
no data available
Carcinogenicity
no data available
Reproductive toxicity
no data available
STOT-single exposure
no data available
STOT-repeated exposure
no data available
Aspiration hazard
no data available

12.Ecological information
12.1Toxicity
Toxicity to fish: no data available
Toxicity to daphnia and other aquatic invertebrates: no data available
Toxicity to algae: no data available
Toxicity to microorganisms: no data available
12.2Persistence and degradability
no data available
12.3Bioaccumulative potential
no data available
12.4Mobility in soil
no data available

12.5Other adverse effects
no data available

13.Disposal considerations
13.1Disposal methods
Product
The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.
Contaminated packaging
Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

14.Transport information
14.1UN Number
ADR/RID: UN1778 IMDG: UN1778 IATA: UN1778
14.2UN Proper Shipping Name
ADR/RID: FLUOROSILICIC ACID
IMDG: FLUOROSILICIC ACID
IATA: FLUOROSILICIC ACID
14.3Transport hazard class(es)
ADR/RID: 8 IMDG: 8 IATA: 8
14.4Packing group, if applicable
ADR/RID: II IMDG: II IATA: II
14.5Environmental hazards
ADR/RID: no IMDG: no IATA: no
14.6Special precautions for user
no data available
14.7Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
no data available

15.Regulatory information
15.1Safety, health and environmental regulations specific for the product in question

Chemical name	Common names and synonyms	CAS number	EC number
Hexafluorosilicic acid	Hexafluorosilicic acid	16961-83-4	none
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
EC Inventory			Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Listed.
China Catalog of Hazardous chemicals 2015			Listed.
New Zealand Inventory of Chemicals (NZIoC)			Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Listed.
Vietnam National Chemical Inventory			Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Listed.

Section 16: Other Information
This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.