Safety data sheet for chemical product

Fluosilicic acid

H_2SiF_6

Safety data sheet for chemical product

Fluosilicic acid

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product name:

Fluosilicic acid; silicofluoric acid

Company name:

Jiangxi Lee & Man Chemical Company Limited

Address:

Dock Industrial City, Jiujiang City, Jiangxi Province

Post code:

332207

Business phone:

0792-8996998

Enterprise emergency number:

0532-83889090

Fax number:

0792-8996988

Email address:

haifeng_sun@leemanchemical.com

Recommended use:

The raw materials for the preparation of fluorosilicate and silicon tetrafluoride are also used in metal electroplating, wood preservation, beer disinfection, etc.f

Restricted use: No relevant information was found.

SECTION 2: Hazards identification

Emergency Overview: Causes severe skin burns and eye damage.

GHS Hazard Category:

Skin corrosion/irritation, Category 1B;

Serious eye damage/eye irritation, Category 1.

Label elements:

Pictograms:

Signal word: Danger

Hazard Statements: Causes severe skin burns and eye damage.

Precautionary Statements:

·Precaution

- Thoroughly wash the body contact area after operation. Contaminated work clothes should also be washed thoroughly.
- Wear protective gloves, protective clothing, protective glasses, and protective face shields.
- Avoid contact with eyes, skin or clothing.

· Incident response

- IF INHALED: Remove victim to fresh air and rest in a position comfortable for breathing. Get medical attention immediately.
- Skin (or hair) contact: Immediately remove all contaminated clothing, rinse skin with water, shower. Contaminated clothing must be washed before reuse.
- Eye contact: Rinse carefully with water for several minutes, if contact lenses are present and easily removed, remove contact lenses and continue rinsing. Seek medical attention.
- Ingestion: Rinse mouth, do not induce vomiting. Seek medical attention.

· Safe storage

- Locked for safekeeping.

·Disposal

- Dispose of this product and its contents and containers in accordance with national and local regulations.

Physical and chemical hazards: non-flammable, no special explosive characteristics.

Health Hazards:

Route of entry: inhalation, ingestion, percutaneous absorption.

Direct contact with the skin will cause redness, local burning sensation, and ulcer formation in severe cases. The effect on the body is similar to that of hydrofluoric acid, but it is weaker.

Environmental Hazards: May be harmful to the environment.

SECTION 3: Composition/information on ingredients

Substance: √ **Mixture: ×**

Main ingredient: fluosilicic acid **relative molecular mass: 144.11**

SECTION 4: First aid measures

Inhalation: quickly leave the scene to fresh air. Keep the airway open. If breathing is difficult, give oxygen. Breathing, heartbeat stopped, immediately perform CPR. Seek medical attention.

Skin Contact: Immediately remove contaminated clothing and rinse thoroughly with plenty of running water for at least 15 minutes. Seek medical attention.

Eye contact: Immediately lift the eyelids and rinse thoroughly with plenty of running water or normal saline for 5 to 10 minutes. Seek medical attention.

Ingestion: Rinse mouth with water, do not induce vomiting. Give milk or egg whites. Seek medical attention.

SECTION 5: Fire-fighting measures

Fire-fighting precautions and protective measures: Firefighters must wear full-body acid-alkali-resistant fire-fighting clothing and air breathing apparatus to extinguish the fire. Move the container from the fire area to an open area as much as possible. Keep fire containers cool by spraying water until the fire is over.

Extinguishing media: foam, dry powder, carbon dioxide, sand.

Hazardous properties: Decomposed when heated to release toxic fluoride gas. Has strong corrosiveness.

SECTION 6: Accidental release measures

Protective measures, protective equipment and emergency procedures for operators: Delineate a warning area according to the influence area of liquid flow and vapor diffusion, and evacuate unrelated personnel to a safe area from the crosswind and upwind directions. It is recommended that emergency personnel wear positive pressure self-contained breathing apparatus, anti-corrosion and anti-virus clothing, and rubber acid and alkali-resistant gloves. Access to ruptured containers and spills is strictly prohibited until emergency personnel have put on appropriate protective clothing. Cut off sources of leaks as much as possible.

Environmental protection measures: Prevent leakage from entering restricted spaces such as sewers and flood drains.

Containment and removal of spilled chemicals: For small spills, absorb or cover with dry sand or other non-combustible materials, and collect in containers. For large spills, build dikes or

dig pits to contain them, and neutralize them with crushed limestone (CaCO3), soda ash (Na2CO3) or lime (CaO). Transfer to a tanker or special collector with a corrosion-resistant pump.
Precautions to Prevent Secondary Hazards: Collected material should be recycled or transported to a waste disposal site for disposal.

SECTION 7: Handling and storage

Operation and disposal: closed operation, pay attention to ventilation. The operation is as mechanized and automated as possible. Operators must undergo special training and strictly abide by operating procedures. It is recommended that operators wear self-priming filter respirators (full face masks), rubber acid and alkali resistant clothing, and rubber acid and alkali resistant gloves. Keep away from flammable and combustible materials. Prevent vapors from leaking into the workplace air. Avoid contact with alkalis. When handling, it should be lightly loaded and unloaded to prevent damage to packaging and containers. Equipped with leakage emergency treatment equipment. Empty containers may be harmful residues.
Storage: Store in a cool, well-ventilated warehouse. The storage temperature should not exceed 30℃, and the relative humidity should not exceed 80%. Keep container tightly closed. Keep away from fire and heat sources. Avoid sun exposure. It should be stored separately from flammable or combustible substances and alkalis, and should not be mixed. Storage areas should be equipped with emergency release equipment and suitable containment materials.

SECTION 8: Exposure controls/personal protection

Occupational exposure limits:
China (PC-TWA) 2 mg/m3 [as F]
United States (TLV-TWA) ACGIH 2.5 mg/m3 [as F]
Biological exposure limit: Urinary fluoride: 42mmol/mol creatinine (7mg/g creatinine) (sampling time: after work shift)
Monitoring method: Determination method of toxic substances in air: Ion selective electrode method. Biomonitoring test method: ion-selective electrode determination method of fluoride in urine.
Engineering control: closed operation, pay attention to ventilation. Safety showers and eye wash facilities are provided.

Respiratory protection: Wear filter respirators (full face mask) or air respirators when exposed to its fumes. It is recommended to wear air respirators during emergency rescue or evacuation.

Hand Protection: Wear rubber acid and alkali resistant gloves.

Eye Protection: Respiratory protection has been covered.

Skin and body protection: Wear rubber acid and alkali resistant clothing.

Others: Smoking, eating and drinking are prohibited at the workplace. After work, take a shower and change clothes. Store poison-contaminated clothes separately and wash them for later use. Pay attention to personal hygiene.

SECTION 9: Physical and chemical properties

Appearance and properties: colorless and transparent fuming liquid

Odor: pungent odor

pH value: no information

Melting point (℃): -20～-17

Boiling point (° C): 105 (decomposition)

Flash point (° C): meaningless

Upper explosion limit [%(V/V)]: meaningless

Lower explosion limit [%(V/V)]: meaningless

Saturated vapor pressure (kPa): 3.19 (20℃)

Relative vapor density (air=1): No information available

Relative density (water=1): 1.2

Solubility: soluble in water

Log value of octanol/water partition coefficient: no significance

Ignition temperature (° C): no significance

Critical temperature (℃): No information available

Critical pressure (MPa): No information available

SECTION 10: Stability and reactivity

Stability: stable

Hazardous reactions: react with incompatible substances such as bases

Conditions to Avoid: Heat Incompatible Materials: Alkali, Flammable or Combustible

Hazardous (decomposition) products: hydrogen fluoride

SECTION 11: Toxicological information

Acute toxicity: LD50: Rat oral 430mg/kg

Skin irritation or corrosion: No information available.

Eye irritation or corrosion: No information available.

Respiratory or skin sensitization: No information available.

Germ cell mutagenicity: Not available.

Carcinogenicity: No information available.

Reproductive toxicity: No information available.

Specific Target Organ Toxicity - Single Exposure: No information available.

Specific target organ toxicity - repeated exposure: No information available.

Aspiration Hazard: No information available.

SECTION 12: Ecological information

Ecotoxicity: Not available.

Persistence and Degradability: No information available.

Bioaccumulative potential: No data available.

Mobility in soil: No data available.

SECTION 13: Disposal considerations

Waste chemicals: Dispose of in accordance with relevant national and local regulations. Or contact the manufacturer to determine disposal method.

Contaminated Packaging: Return container to manufacturer or dispose of in accordance with national and local regulations.

Disposal Precautions: Please refer to relevant national and local regulations before disposal.

SECTION 14: Transport information

United Nations Dangerous Goods Number (UN Number): 1778 UN

Shipping Name: Fluorosilicic acid

United Nations hazard class: Class 8. Corrosive substances

Packing group: Packing group II

Packaging Category:-

packaging sign

Marine Pollutants: No

Packing method: put into plastic bottles, special bakelite, rubber or lead containers, tightly sealed and then put into sturdy wooden boxes. The wooden box is lined with non-combustible materials, the net weight of each box is not more than 20 kg, and each box of 3-5 kg is limited to 4 bottles; the frosted mouth glass bottle or the screw mouth glass bottle is outside the ordinary wooden box.

Transportation Precautions: The packaging should be complete and the loading should be secure at the time of departure. During transportation, make sure that the container does not leak, collapse, fall or be damaged. It is strictly forbidden to mix and transport with flammable or combustible materials, alkalis, edible chemicals, etc. The transport vehicle shall be equipped with leakage emergency treatment equipment during transportation. During transportation, it should be protected from exposure to sunlight, rain, and high temperature. When transporting by road, it is necessary to drive according to the prescribed route, and do not stop in residential areas and densely populated areas.

SECTION 15: Regulatory information

The following laws, regulations and standards provide corresponding provisions on the safe use, storage, transportation, handling, classification and marking of chemicals:

Production Safety Law of the People's Republic of China;

Law of the People's Republic of China on the Prevention and Control of Occupational Diseases

Classification and Catalogue of Occupational Diseases: Poisoning by Fluorine and its Inorganic Compounds;

The Environmental Protection Law of the People's Republic of China;

Occupational exposure limits for hazardous agents in the workplace;

Regulations on the Safety Management of Hazardous Chemicals: Catalogue of Hazardous Chemicals: Included. Inventory of explosive hazardous chemicals: not listed. List of hazardous chemicals under key supervision: not listed. GB18218-2018 "Identification of Major Hazardous Sources of Hazardous Chemicals" (Table 1): not listed;

Labor Protection Regulations for Workplaces Using Toxic Substances Catalogue of Highly Toxic Substances: Included;

Regulations on the Administration of Precursor Chemicals Classification and Variety List of Precursor Chemicals: Not listed;

The classification and product name number of dangerous goods (GB6944-2012) is classified as Class 8 corrosive substances.

SECTION 16: Other information

References:

(1) The latest practical manual for chemical dangerous goods;

(2) Complete book on safety technology of hazardous chemicals;

Disclaimer:

The information in this SDS applies only to the specified product, unless otherwise specified, all substances in this product have unknown hazards and should be used with care. While certain hazards are described in this SDS, we do not guarantee that these are the only hazards. This SDS provides information on the safety of product use only for those users of this product who have received appropriate professional training. The relevant data is only used as a guide for safe handling, use, processing, storage, disposal and leakage, etc., and cannot be used as an indicator of guarantee and quality.