

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name : Fluorosulfonic acid

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

According to Regulation (EC) No1272/2008  
Acute toxicity (Category 4)  
Skin corrosion (Category 1A)

According to European Directive 67/548/EEC as amended.  
Causes severe burns. Harmful by inhalation.

Label elements

Pictogram 

Signal word Danger

Hazard statement(s)  
H314 Causes severe skin burns and eye damage.  
H332 Harmful if inhaled.

Precautionary statement(s)  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

Hazard symbol(s)  
C Corrosive

R-phrases(s)  
R20 Harmful by inhalation.  
R35 Causes severe burns.

S-phrases(s)  
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Fluosulfuric acid

Formula : HFO3S

Molecular Weight : 100,07 g/mol

| CAS-No.                    | EC-No.    |   | Classification                                       | Concentration |
|----------------------------|-----------|---|------------------------------------------------------|---------------|
| <b>Fluorsulphonic acid</b> |           |   |                                                      |               |
| 7789-21-1                  | 232-149-4 | - | Acute Tox. 4; Skin Corr. 1A; H314, H332 C, R20 - R35 | -             |

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid inhalation of vapour or mist.  
Normal measures for preventive fire protection.

Conditions for safe storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature: 2 - 8 °C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Handle with gloves.

Eye protection

Tightly fitting safety goggles. Faceshield (8-inch minimum).

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form clear, liquid  
Colour colourless

Safety data

|                         |                       |
|-------------------------|-----------------------|
| pH                      | no data available     |
| Melting point           | -87,3 °C - lit.       |
| Boiling point           | 165,5 °C - lit.       |
| Flash point             | not applicable        |
| Ignition temperature    | no data available     |
| Lower explosion limit   | no data available     |
| Upper explosion limit   | no data available     |
| Vapour pressure         | 3,3 hPa at 25 °C      |
| Density                 | 1,726 g/cm3 at 25 °C  |
| Water solubility        | no data available     |
| Relative vapour density | 3,45<br>- (Air = 1.0) |

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

no data available

Materials to avoid

Strong bases, Alcohols, Metals

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Sulphur oxides, Hydrogen fluoride

11. TOXICOLOGICAL INFORMATION

Acute toxicity

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Potential health effects

|                   |                                                                                                                          |
|-------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b> | Harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. |
| <b>Ingestion</b>  | May be harmful if swallowed. Causes severe burns.                                                                        |
| <b>Skin</b>       | May be harmful if absorbed through skin. Causes severe skin burns.                                                       |
| <b>Eyes</b>       | Causes severe eye burns.                                                                                                 |

Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea

Additional Information

RTECS: LP0715000

12. ECOLOGICAL INFORMATION

Toxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

ADR/RID

UN-Number: 1777 Class: 8 Packing group: I  
Proper shipping name: FLUOROSULPHONIC ACID

IMDG

UN-Number: 1777 Class: 8 Packing group: I EMS-No: F-A, S-B  
Proper shipping name: FLUOROSULPHONIC ACID

Marine pollutant: No

IATA

UN-Number: 1777 Class: 8 Packing group: I  
Proper shipping name: Fluorosulphonic acid

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

16. OTHER INFORMATION

Text of H-code(s) and R-phrases(s) mentioned in Section 3

|            |                                          |
|------------|------------------------------------------|
| Acute Tox. | Acute toxicity                           |
| H314       | Causes severe skin burns and eye damage. |
| H332       | Harmful if inhaled.                      |
| Skin Corr. | Skin corrosion                           |
| C          | Corrosive                                |
| R20        | Harmful by inhalation.                   |
| R35        | Causes severe burns.                     |

Further information

For R&D use only. Not for drug, household or other uses.



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WARRANTY:

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