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| <b>TRIFLUORO METHANE<br/>SULPHONIC ACID<br/>CAS No 1493-13-6</b> | <b>MATERIAL SAFETY DATA SHEET<br/>SDS/MSDS</b> |
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**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1 Product identifiers**

Product name : Trifluoro Methane Sulphonic Acid

CAS-No. : 1493-13-6

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

Identified uses : Laboratory chemicals, Industrial & for professional use only.

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

Company : Central Drug House (P) Ltd  
7/28 Vardaan House  
New Delhi -110002  
INDIA

Telephone : +91 11 49404040  
Email : [care@cdhfinechemical.com](mailto:care@cdhfinechemical.com)

**1.4 Emergency telephone number**

Emergency Phone # : +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008**

Acute toxicity, Oral (Category 4), H302  
Acute toxicity, Dermal (Category 4), H312  
Skin corrosion (Category 1A), H314

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

**2.2 Label elements**

**Labelling according Regulation (EC) No 1272/2008**

Pictogram



Signal word

Danger

Hazard statement(s)

H302 + H312

H314

Harmful if swallowed or in contact with skin  
Causes severe skin burns and eye damage.

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/doctor.

Supplemental Hazard Statements                      none

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Synonyms                                      :    Triflic acid

Formula                                        :    CHF<sub>3</sub>O<sub>3</sub>S

Molecular weight                            :    150.08 g/mol

CAS-No.                                        :    1493-13-6

EC-No.                                         :    216-087-5

#### Hazardous ingredients according to Regulation (EC) No 1272/2008

| Component                             | Classification | Concentration                                    |
|---------------------------------------|----------------|--|
| <b>Trifluoromethanesulphonic acid</b> |                |  |
| CAS-No.                               | 1493-13-6      | Acute Tox. 4; Skin Corr. 1A;<br>H302, H312, H314 |
| EC-No.                                | 216-087-5      |  |

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

## SECTION 4: First aid measures

### 4.1 Description of 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.

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

#### Unsuitable extinguishing media

Water

### 5.2 Special hazards arising from the substance or mixture

Carbon oxides, Sulphur oxides, Hydrogen fluoride

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

No data available

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

### 6.2 Environmental precautions

Do not let product enter drains.

### 6.3 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.

### 6.4 Reference to other sections

For disposal see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

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.

Store under inert gas.

Storage class (TRGS 510): Non-combustible, corrosive hazardous materials

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

### 8.2 Exposure controls

#### Appropriate engineering controls

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

#### Personal protective equipment

##### Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### Skin protection

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.

##### Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

##### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (US) or type ABEK (EN 14387) respirator cartridges as a backup to enginee 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).

## Control of environmental exposure

Do not let product enter drains.

### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

|   |                                      |
|---|--------------------------------------|
| a) Appearance                                   | Form: liquid<br>Colour: light yellow |
| b) Odour  | pungent                              |
| c) Odour Threshold                              | No data available                    |
| d) pH   | < 1                                  |
| e) Melting point/freezing point                 | -39.99 °C                            |
| f) Initial boiling point and boiling range      | 162 °C - lit.                        |
| g) Flash point                                  | No data available                    |
| h) Evaporation rate                             | No data available                    |
| i) Flammability (solid, gas)                    | No data available                    |
| j) Upper/lower flammability or explosive limits | No data available                    |
| k) Vapour pressure                              | 8 mmHg at 25 °C                      |
| l) Vapour density                               | 5.18 - (Air = 1.0)                   |
| m) Relative density                             | 1.696 g/mL at 25 °C                  |
| n) Water solubility                             | slightly soluble                     |
| o) Partition coefficient: n-octanol/water       | log Pow: -0.49                       |
| p) Auto-ignition temperature                    | No data available                    |
| q) Decomposition temperature                    | No data available                    |
| r) Viscosity                                    | No data available                    |
| s) Explosive properties                         | No data available                    |
| t) Oxidizing properties                         | No data available                    |

#### 9.2 Other safety information

Relative vapour density 5.18 - (Air = 1.0)

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

No data available

#### 10.2 Chemical stability

Stable under recommended storage conditions.

#### 10.3 Possibility of hazardous reactions

No data available

#### 10.4 Conditions to avoid

Exposure to moisture

#### 10.5 Incompatible materials

Strong oxidizing agents, Strong bases, Water, Metals

## 10.6 Hazardous decomposition products

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

Other decomposition products - No data available

In the event of fire: see section 5

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - 1,605 mg/kg(Trifluoromethanesulphonic acid)

LD50 Dermal - Rat - 400 - 2,000 mg/kg(Trifluoromethanesulphonic acid)

#### Skin corrosion/irritation

No data available(Trifluoromethanesulphonic acid)

#### Serious eye damage/eye irritation

No data available(Trifluoromethanesulphonic acid)

#### Respiratory or skin sensitisation

No data available(Trifluoromethanesulphonic acid)

#### Germ cell mutagenicity

No data available(Trifluoromethanesulphonic acid)

#### 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(Trifluoromethanesulphonic acid)

#### Specific target organ toxicity - single exposure

No data available(Trifluoromethanesulphonic acid)

#### Specific target organ toxicity - repeated exposure

No data available

#### Aspiration hazard

No data available(Trifluoromethanesulphonic acid)

#### Additional Information

RTECS: Not available

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

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.(Trifluoromethanesulphonic acid)

## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - > 2,000 mg/l - 96 h(Trifluoromethanesulphonic acid)

### 12.2 Persistence and degradability

Biodegradability Result: - Not readily biodegradable.

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available(Trifluoromethanesulphonic acid)

## 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## 12.6 Other adverse effects

No data available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

#### Contaminated packaging

Dispose of as unused product.

## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: 3265

IMDG: 3265

IATA: 3265

### 14.2 UN proper shipping name

ADR/RID: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Trifluoromethanesulphonic acid)

IMDG: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Trifluoromethanesulphonic acid)

IATA: Corrosive liquid, acidic, organic, n.o.s. (Trifluoromethanesulphonic acid)

### 14.3 Transport hazard class(es)

ADR/RID: 8

IMDG: 8

IATA: 8

### 14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

### 14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

### 14.6 Special precautions for user

No data available

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

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

### 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

## SECTION 16: Other information

### Full text of H-Statements referred to under sections 2 and 3.

H302 Harmful if swallowed.

H302 + H312 Harmful if swallowed or in contact with skin

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

### Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.cdhfinechemical.com](http://www.cdhfinechemical.com) for additional terms and conditions of sale.