

ALADDIN SCIENTIFIC CORPORATION  
14078 Meridian Parkway, Riverside, CA. 92518

# SAFETY DATA SHEET

Version: v1  
Revision Date: 2024-01-10  
Print Date: 2024-01-11

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

### 1.1 Product identifiers

Product name : Trifluoroacetic acid  
Product Number : T103293  
Brand : aladdin  
CAS-No. : 76-05-1

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

Identified uses : Laboratory chemicals, Manufacture of substances.

### 1.3 Company

Company : ALADDIN SCIENTIFIC CORPORATION  
Address : 14078 Meridian Parkway,  
Riverside, CA. 92518  
Telephone : +1 (833) 552-7181  
Fax : no data available

### 1.4 Emergency telephone number

CHEMTREC®, Inside the USA : 1-800-424-9300  
CHEMTREC®, Outside the USA :

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Inhalation (Category 4), H332

Skin corrosion (Sub-category 1A), H314

Serious eye damage (Category 1), H318

Long-term (chronic) aquatic hazard (Category 3), H412

### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

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|                            |  |
|----------------------------|--|
| H314                       | Causes severe skin burns and eye damage  |
| H332                       | Harmful if inhaled   |
| H412                       | Harmful to aquatic life with long lasting effects  |
| Precautionary statement(s) |  |
| P261                       | Avoid breathing dust/fume/gas/mist/vapors/spray.   |
| P264                       | Wash hands [and ...] thoroughly after handling.  |
| P271                       | Use only outdoors or in a well-ventilated area.  |
| P273                       | Avoid release to the environment.  |
| P280                       | Wear protective gloves/protective clothing/eye protection/face protection.   |
| P363                       | Wash contaminated clothing before reuse.   |
| 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].   |
| P402+P404                  | Store in a dry place. Store in a closed container.   |
| P501                       | Dispose of contents/container to an approved waste disposal plant.   |
| 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. If contact lenses are worn and can be easily removed, remove Contact lenses. Continue rinsing. Immediately call an emergency center/doctor. |

**2.3 Hazards not otherwise classified (HNOC) or not covered by GHS**

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

**3.1 Substances**

|                  |                  |
|------------------|------------------|
| Synonyms         | : TFA IPC-PFFA-2 |
| Formula          | : CF3COOH        |
| Molecular weight | : 114.02         |
| CAS No.          | : 76-05-1        |
| EC-NO.           | : 200-929-3      |

| Component            | Classification    | Concentration                |
|----------------------|-------------------|------------------------------|
| Trifluoroacetic acid | no data available | ≥99%, for protein sequencing |

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

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#### General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

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

no data available

### 4.3 Indication of any immediate medical attention and special treatment needed

no data available

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media

Water Foam Carbon dioxide (CO2) Dry powder

Unsuitable extinguishing media

no data available

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

Carbon oxides Hydrogen fluoride Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

no data available

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## SECTION 6: Accidental release measures

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

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

### 6.2 Environmental precautions

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Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent and neutralising material. Dispose of properly. Clean up affected area.

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

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

Tightly closed. hygroscopic Store under inert gas.

### 7.3 Specific end use(s)

no data available

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## 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

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166(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. The selected protective gloves have to satisfy the specifications of Regulation (EU)2016/425 and the standard EN 374 derived from it.

Body Protection

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

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#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface particle respirator type N100 (US) or type P3 (EN 143) 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).

#### Control of environmental exposure

no data available

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|   |                               |
|---|-------------------------------|
| a) Appearance                                   | form: Liquid color: Colorless |
| b) Odour  | no data available             |
| c) Odour Threshold                              | no data available             |
| d) pH   | no data available             |
| e) Melting point/freezing point                 | -15.4°C                       |
| f) Initial boiling point and boiling range      | 71.8°C                        |
| g) Flash point                                  | >100°C                        |
| 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                              | no data available             |
| l) Vapour density                               | no data available             |
| m) Relative density                             | 1.489                         |
| n) Water solubility                             | no data available             |
| o) Partition coefficient: n-octanol/water       | no data available             |
| p) Auto-ignition temperature                    | no data available             |
| q) Decomposition temperature                    | no data available             |
| r) Viscosity                                    | no data available             |
| s) Explosive properties N                       | no data available             |
| t) Oxidizing properties N                       | no data available             |

### 9.2 Other safety information

no data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

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### 10.3 Possibility of hazardous reactions

Risk of explosion with: lithium aluminium hydride hydrides Exothermic reaction with: alkalines Ammonia Generates dangerous gases or fumes in contact with: acids

### 10.4 Conditions to avoid

Strong heating.

### 10.5 Incompatible materials

rubber, Metals

### 10.6 Hazardous decomposition products

no data available

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Acute toxicity

Oral: No data available

Symptoms: Nausea, Vomiting, strong pain (risk of perforation!), If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

LC50 Inhalation - Rat - 4 h - 10.01 mg/l - vapor

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract, Inhalation may lead to the formation of oedemas in the respiratory tract.

Dermal: No data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

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Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

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

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## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish static test LC50 - Danio rerio (zebra fish) - > 999 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - > 999 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata - 237.07 mg/l - 72 h (OECD Test Guideline 201)

Toxicity to bacteria EC50 - activated sludge - > 832 mg/l - 3 h (OECD Test Guideline 209)

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential

no data available

### 12.4 Mobility in soil

no data available

### 12.5 Results of PBT and vPvB assessment

no data available

### 12.6 Other adverse effects

no data available

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## SECTION 13:

### 13.1 Disposal considerations

Product

Recycle to process, if possible. Consult your local regional authorities and an expert of disposal. You may be able to dissolve or mix material with a combustible solvent and little by little burn in a chemical incinerator equipped with an afterburner and scrubber system. If a large amount of the substance is burned at a time, an explosion may occur.

Observe all federal, state and local regulations when disposing of the substance.

Contaminated packaging

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Dispose of as unused product.

## SECTION 14: Transport information

### DOT (US)

|   |   |  |
|---|---|--|
| UN number: 2699                               | Packing group: I                              | Class: 8                                       |
| Proper shipping name:<br>TRIFLUOROACETIC ACID | Reportable Quantity(RQ): no data<br>available | Poison Inhalation Hazard: no data<br>available |
| Environmental Hazards: no                     |   |  |

### IMDG

|  |                  |                           |
|--|------------------|---------------------------|
| UN number: 2699                            | Packing group: I | EMS-No: no data available |
| Proper shipping name: TRIFLUOROACETIC ACID |                  |                           |

### IATA

|  |                  |          |
|--|------------------|----------|
| UN number: 2699                            | Packing group: I | Class: 8 |
| Proper shipping name: TRIFLUOROACETIC ACID |                  |          |

## SECTION 15: Regulatory information

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

## SECTION 16: Other information

|                         |  |
|-------------------------|--|
| <b>Prepared By</b>      | Regulatory Affairs<br>ALADDIN SCIENTIFIC CORPORATION<br>Email: QualityAssurance@aladdinsci.com |
| <b>Creation Date</b>    | 30-Nov-2023  |
| <b>Revision Date</b>    | 10-Jan-2024  |
| <b>Print Date</b>       | 11-Jan-2024  |
| <b>Revision Summary</b> | SDS sections updated v1  |

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