

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

# SAFETY DATA SHEET

Version: v1  
Revision Date: 2024-01-22  
Print Date: 2024-01-28

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

### 1.1 Product identifiers

Product name : Tetrabutylammonium fluoride solution  
Product Number : T106822  
Brand : aladdin  
CAS-No. : 429-41-4(Water)

### 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, oral (Class 4), H302

Skin corrosion/irritation (Category 2), H315

Severe eye injury/eye irritation (Category 2A), H319

Acute (short-term) aquatic hazard (Category 3), H402

Long term aquatic hazards (Category 2), H411

### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Warning

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Hazard statement(s)

- H302 Harmful if swallowed
- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H402 Harmful to aquatic life
- H411 Toxic to aquatic life with long lasting effects

Precautionary statement(s)

- P264 Wash hands [and ...] thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P391 Collect spillage.
- P302+P352 IF ON SKIN: wash with plenty of water.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
- P332+P313 IF SKIN irritation occurs: Get medical advice/attention.
- P337+P313 IF eye irritation persists: Get medical advice/attention.
- P501 Dispose of contents/container to an approved waste disposal plant.
- P301+P312+P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures

- Synonyms : TBAF solution Tetrabutylammonium fluoride TBAF Tetra-n-butyl ammonium fluoride Tetrabutylammonium Fluoride Hydrate
- Formula : no data available
- Molecular weight : no data available

Component	Classification	Concentration
<b>Tetrabutylammonium fluoride</b>		
CAS-No. : 429-41-4	Acute toxicity category 4; Skin corrosion/thorns Excitation category 2;	
EC-No. :	Severe eye damage/eye damage Irritant category 2A; Acute (short-term) Aquatic hazard category 3; Long term aquatic hazards Hazard category 2; H302, H315, H319, H402, H411	

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Show this material safety data sheet to the doctor in attendance.

If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

In case of skin contact

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

In case of eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

If swallowed

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

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

Unsuitable extinguishing media

no data available

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

Carbon oxides nitrogen oxide Hydrogen fluoride A mixture with combustible components. When a fire occurs, it may cause the generation of hazardous gases or vapors

#### 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

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

---

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## 6.2 Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

## 6.3 Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

## 6.4 Reference to other sections

For disposal see section 13.

---

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Operators should be specially trained and strictly abide by the operating procedures. Operation and disposal should be carried out in a place with local ventilation or general ventilation facilities. Avoid eye and skin contact and avoid breathing vapor. See Section 8 for personal protective measures. Keep away from fire and heat sources, and smoking is strictly prohibited in the workplace. Use explosion-proof ventilation systems and equipment. If canning is required, the flow rate should be controlled, and there should be a grounding device to prevent the accumulation of static electricity. Avoid contact with incompatible substances such as oxidizing agents (see section 10 for incompatible substances). When handling, it should be lightly loaded and unloaded to prevent damage to packaging and containers. Empty containers may be harmful residues. Wash hands after use and prohibit eating or drinking in the workplace. Equipped with the corresponding variety and quantity of fire fighting equipment and leakage emer

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

Store in a cool and ventilated warehouse.

### 7.3 Specific end use(s)

no data available

---

## 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

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

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.

#### 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

If safety requires, prevent further leakage or spillage. Do not let the product enter the sewer.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Appearance	form: liquid color: Colorless to light yellow
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	no data available
f) Initial boiling point and boiling range	no data available
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	no data available
l) Vapour density	no data available
m) Relative density	0.903
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

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## 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.

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

Hazardous gas generation or contact with the right item can produce harmful smoke: acid

### 10.5 Incompatible materials

strong oxidant

### 10.6 Hazardous decomposition products

no data available

---

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Acute toxicity

Acute toxicity estimated orally -666.8 mg/kg

(Calculation method)

Symptoms: Mucosal irritation in the mouth, throat, esophagus, and digestive tract

Symptoms: Possible symptoms: Mucosal irritation

Transcutaneous: No data available

Skin corrosion/irritation

May cause skin irritation

Serious eye damage/eye irritation

Can cause serious eye irritation.

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Carcinogenicity

no data available

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

Additional Information

Burn sensation: cough, wheezing, laryngitis, shortness of breath, spasms, inflammation, sore throat, spasms, inflammation, bronchitis, pneumonia, pulmonary edema, etc

Massive damage to mucosal tissue, upper respiratory tract, eyes, and skin., Salivation, abdominal pain, fever, difficulty breathing, fluoride ions can reduce serum calcium dissociation

Subconcentration may lead to fatal hypocalcemia., Perforation of the nasal septum, to the best of our knowledge, has not been fully studied for its chemical, physical, and toxic properties

Research.

Other hazards cannot be ruled out.

Operate in accordance with good industrial hygiene and safety practices.

---

## SECTION 12: Ecological information

### 12.1 Toxicity

no data available

### 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

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

---

**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

Dispose of as unused product.

---

**SECTION 14: Transport information**

## DOT (US)

UN number: 3082

Packing group: III

Class: 9

Proper shipping name: Liquid

Reportable Quantity(RQ): no data

Poison Inhalation Hazard: no data

substances harmful to the environment, available

available

not otherwise specified

(tetrabutylammonium fluoride)

Environmental Hazards: yes

## IMDG

UN number: 3082

Packing group: III

EMS-No: no data available

Proper shipping name: Liquid substances harmful to the environment, not otherwise specified (tetrabutylammonium fluoride)

## IATA

UN number: 3082

Packing group: III

Class: 9

Proper shipping name: Liquid substances harmful to the environment, not otherwise specified (tetrabutylammonium fluoride)

---

**SECTION 15: Regulatory information**

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

---

**SECTION 16: Other information**

## Prepared By

Regulatory Affairs

ALADDIN SCIENTIFIC CORPORATION

Email: QualityAssurance@aladdinsci.com

## Creation Date

30-May-2023

## Revision Date

22-Jan-2024

## Print Date

28-Jan-2024

## Revision Summary

SDS sections updated v1



---

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Disclaimer

Copyright Aladdin Co. Ltd. License granted to make unlimited paper copies for internal use only. 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. Aladdin Co. Ltd. and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.