

# SAFETY DATA SHEET

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

### 1.1 Product identifiers

Product name : O-[(Ethoxycarbonyl)cyanomethylenamino]-N,N,N',N'-tetramethyluronium hexafluorophosphate  
Product Number : O293018  
Brand : aladdin  
CAS-No. : 333717-40-1

### 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)

Skin irritation (Category 2), H315

Eye irritation (Category 2), H319

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Warning

Hazard statement(s)

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|                                   |                                                                                                                                  |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| H315                              | Causes skin irritation                                                                                                           |
| H319                              | Causes serious eye irritation                                                                                                    |
| H335                              | May cause respiratory irritation                                                                                                 |
| <b>Precautionary statement(s)</b> |                                                                                                                                  |
| 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.                                                                                  |
| P280                              | Wear protective gloves/protective clothing/eye protection/face protection.                                                       |
| P321                              | Specific treatment (see ... on this label).                                                                                      |
| P302+P352                         | IF ON SKIN: wash with plenty of water.                                                                                           |
| P304+P340                         | IF INHALED: Remove person to fresh air and keep comfortable for breathing.                                                       |
| P305+P351+P338                    | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing. |
| P362+P364                         | Take off contaminated clothing and wash it before reuse.                                                                         |
| P405                              | Store locked up.                                                                                                                 |
| P403+P233                         | Store in a well-ventilated place. Keep container tightly closed.                                                                 |
| P501                              | Dispose of contents/container to an approved waste disposal plant.                                                               |
| P264+P265                         | Wash hands [and ...] thoroughly after handling. Do not touch eyes.                                                               |
| P337+P317                         | If eye irritation persists: Get medical help.                                                                                    |
| P332+P317                         | If skin irritation occurs: Get medical help.                                                                                     |
| P319                              | Get medical help if you feel unwell.                                                                                             |

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

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

|                  |                                                                                                                                                                                         |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Synonyms         | : 6-Cyano-N,N,2-trimethyl-7-oxo-4,8-dioxa-2,5-diazadec-5-en-3-aminium hexafluorophosphate HOTU; 6-Cyano-N,N,2-trimethyl-7-oxo-4,8-dioxa-2,5-diazadec-5-en-3-aminiumhexafluorophosphate; |
| Formula          | : C10H17F6N4O3P                                                                                                                                                                         |
| Molecular weight | : 386.23                                                                                                                                                                                |
| CAS No.          | : 333717-40-1                                                                                                                                                                           |
| EC-NO.           | : no data available                                                                                                                                                                     |

| Component                                                                                          | Classification                                           | Concentration |
|----------------------------------------------------------------------------------------------------|----------------------------------------------------------|---------------|
| O-<br>[(Ethoxycarbonyl)cyanomethylenamino]-<br>N,N,N',N'-tetramethyluronium<br>hexafluorophosphate | Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H315, H319, H335 | ≥98%          |

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## 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. Hydrofluoric (HF) acid burns require immediate and specialized first aid and medical treatment. Symptoms may be delayed up to 24 hours depending on the concentration of HF. After decontamination with water, further damage can occur due to penetration/absorption of the fluoride ion. Treatment should be directed toward binding the fluoride ion as well as the effects of exposure. Skin exposures can be treated with a 2.5% calcium gluconate gel repeated until burning ceases. More serious skin exposures may require subcutaneous calcium gluconate except for digital areas unless the physician is experienced in this technique, due to the potential for tissue injury from increased pressure. Absorption can readily occur through the subungual areas and should be considered when undergoing decontamination. Prevention of absorption of the fluoride ion in cases of ingestion can be obtained by giving milk, chewable calcium carbonate tablets or Milk of Magnesia to conscious victims. Conditions such as hypocalcemia, hypomagnesemia and cardiac arrhythmias should be monitored for, since they can occur after exposure.

#### If inhaled

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

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician. First treatment with calcium gluconate paste.

#### In case of eye contact

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

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

### 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

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

#### Unsuitable extinguishing media

no data available

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

Carbon oxides, Nitrogen oxides (NOx), Oxides of phosphorus, Hydrogen fluoride

### 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

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

### 6.2 Environmental precautions

Do not let product enter drains.

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

Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 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

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

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

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature 2 - 8 °C Light sensitive. Store under inert gas. Moisture sensitive.

### 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**

General industrial hygiene practice.

**Personal protective equipment**

**Eye/face protection**

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. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

**Body Protection**

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. 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

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**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

|                                                 |                   |
|-------------------------------------------------|-------------------|
| a) Appearance                                   | no data available |
| b) Odour                                        | no data available |
| c) Odour Threshold                              | no data available |
| d) pH                                           | no data available |
| e) Melting point/freezing point                 | 128-131 °C        |
| 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                             | no data available |
| 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.

**10.3 Possibility of hazardous reactions**

no data available

**10.4 Conditions to avoid**

no data available

**10.5 Incompatible materials**

Strong oxidizing agents

**10.6 Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Oxides of phosphorus, Hydrogen fluoride

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**SECTION 11: Toxicological information****11.1 Information on toxicological effects**

**Acute toxicity**

**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**

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**

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no data available

**Aspiration hazard**

Inhalation - May cause respiratory irritation.

**Additional Information**

RTECS: Not available

Fluoride ion can reduce serum calcium levels possibly causing fatal hypocalcemia.

## 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

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:

### 13.1 Disposal considerations

**Product**

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

**Contaminated packaging**

Dispose of as unused product.

## SECTION 14: Transport information

**DOT (US)**

UN number: no data available

Packing group: no data available

Class: no data available

Proper shipping name: Not dangerous goods

Reportable Quantity(RQ): no data available

Poison Inhalation Hazard: no data available

Environmental Hazards: no

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**IMDG**

UN number: no data available

Packing group: no data available

EMS-No: no data available

Proper shipping name: Not dangerous goods

**IATA**

UN number: no data available

Packing group: no data available

Class: no data available

Proper shipping name: Not dangerous goods

## 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

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