

# SAFETY DATA SHEET

Version: v1

Revision Date: 2025-09-12

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

### 1.1 Product identifiers

|                |                                               |
|----------------|-----------------------------------------------|
| Product name   | : Diethyl 2,2,3,3,4,4-Hexafluoropentanedioate |
| Product Number | : D154392                                     |
| Brand          | : aladdin                                     |
| CAS-No.        | : 424-40-8                                    |

### 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)

CFR 1910.1200: Acute Toxicity - Inhalation [Category 4] Skin Corrosion/Irritation [Category 2] Eye Damage/Irritation [Category 2A] Flammable Liquids [Category 4]

### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H302

Harmful if swallowed

H312

Harmful in contact with skin

H314

Causes severe skin burns and eye damage

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|                                   |                                                                                                                                  |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| H315                              | Causes skin irritation                                                                                                           |
| H319                              | Causes serious eye irritation                                                                                                    |
| H330                              | Fatal if inhaled                                                                                                                 |
| H332                              | Harmful if inhaled                                                                                                               |
| H335                              | May cause respiratory irritation                                                                                                 |
| <b>Precautionary statement(s)</b> |                                                                                                                                  |
| P260                              | Do not breathe dust/fume/gas/mist/vapors/spray.                                                                                  |
| P261                              | Avoid breathing dust/fume/gas/mist/vapors/spray.                                                                                 |
| P264                              | Wash hands [and ...] thoroughly after handling.                                                                                  |
| P270                              | Do not eat, drink or smoke when using this product.                                                                              |
| P271                              | Use only outdoors or in a well-ventilated area.                                                                                  |
| P280                              | Wear protective gloves/protective clothing/eye protection/face protection.                                                       |
| P284                              | [In case of inadequate ventilation] Wear respiratory protection.                                                                 |
| P320                              | Specific treatment is urgent (see ... on this label).                                                                            |
| P321                              | Specific treatment (see ... on this label).                                                                                      |
| P330                              | Rinse mouth.                                                                                                                     |
| P363                              | Wash contaminated clothing before reuse.                                                                                         |
| P301+P330+P331                    | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.                                                                               |
| 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.                                                               |
| P301+P317                         | IF SWALLOWED: Get medical help.                                                                                                  |
| P305+P354+P338                    | IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. |
| P317                              | Get emergency medical help.                                                                                                      |
| P337+P317                         | If eye irritation persists: Get medical help.                                                                                    |
| P332+P317                         | If skin irritation occurs: Get medical help.                                                                                     |
| P302+P361+P354                    | IF ON SKIN: Take off Immediately all contaminated clothing. Immediately rinse with water for several minutes.                    |
| P316                              | Get emergency medical help immediately.                                                                                          |
| 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

Phone: +1 (833) 552-7181 Email: [QualityAssurance@aladdinsci.com](mailto:QualityAssurance@aladdinsci.com) Website: <https://www.aladdinsci.com/>

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|                                                                                  |                                                                        |
|----------------------------------------------------------------------------------|------------------------------------------------------------------------|
| Synonyms                                                                         | : Diethyl Hexafluoroglutarate; 2,2,3,3,4,4-Hexafluoropentanedioic Acid |
| Diethyl Ester; Hexafluoroglutaric Acid Diethyl Ester; Diethyl perfluoroglutarate |                                                                        |
| Formula                                                                          | : C <sub>9</sub> H <sub>10</sub> F <sub>6</sub> O <sub>4</sub>         |
| Molecular weight                                                                 | : 296.17                                                               |
| CAS No.                                                                          | : 424-40-8                                                             |
| EC-NO.                                                                           | : no data available                                                    |

| Component                                   | Classification    | Concentration |
|---------------------------------------------|-------------------|---------------|
| Diethyl 2,2,3,3,4,4-Hexafluoropentanedioate | no data available | ≥98%(GC)      |

**SECTION 4: First aid measures****4.1 Description of first aid measures****General advice**

no data available

**If inhaled**

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

**In case of skin contact**

Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.

**In case of eye contact**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**If swallowed**

Get medical advice/attention if you feel unwell. Rinse mouth.

**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

**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing media**

Dry chemical, foam, water spray, carbon dioxide.

**Unsuitable extinguishing media**

Solid streams of water

## 5.2 Special hazards arising from the substance or mixture

These products include: Carbon oxides Halogenated compounds. Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume. WARNING: Highly toxic HF gas is produced during combustion.

## 5.3 Advice for firefighters

Wear self-contained breathing apparatus if possible.

## 5.4 Further information

Use water spray to cool unopened containers.

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## SECTION 6: Accidental release measures

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

Use personal protective equipment. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.

### 6.2 Environmental precautions

Prevent product from entering drains.

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

Absorb spilled material with a suitable absorbent (e.g. rag, dry sand, soil, sawdust). If the overflow is large, use seals to control the overflow. Adhered or aggregated materials shall be disposed of in a timely manner in accordance with local laws and regulations. Prevention of secondary hazards: Do not contact with water. Remove all sources of ignition. Fire extinguishing devices shall be provided in case of fire. Use spark proof tools and explosion-proof equipment.

### 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

Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent generation of vapour or mist. Keep away from flames and hot surfaces. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Wash hands and face thoroughly after handling. Use a closed system if possible. Use a ventilation, local exhaust if vapour or aerosol will be generated. Avoid contact with skin, eyes and clothing. Conditions for safe storage, including any incompatibilities

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

Keep container tightly closed. Store in a cool, dark and well-ventilated place. Store away from incompatible materials such as oxidizing agents.

### 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

Follow safe industrial engineering/laboratory practices when handling any chemical. Install a closed system or local exhaust as possible so that workers should not be exposed directly. Also install safety shower and eye bath.

#### Personal protective equipment

##### Eye/face protection

Safety glasses. A face-shield, if the situation requires.

##### Skin protection

Gloves must be checked before use. Please use proper methods to remove the gloves (do not touch the outer surface of the gloves), and avoid any skin parts contacting the product. After use, please handle the contaminated gloves carefully according to relevant laws and regulations and effective laboratory rules and procedures. Please clean and blow dry the protective gloves selected for your hands must meet the specifications given in regulation (EU) 2016 / 425 and the en 374 standard derived from it.

##### Body Protection

Protective gloves. Protective clothing. Protective boots, if the situation requires.

##### Respiratory protection

Vapor respirator. Follow local and national regulations.

##### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|                                                 |                                                         |
|-------------------------------------------------|---------------------------------------------------------|
| a) Appearance                                   | form: Clear Liquid color: Slightly pale yellow - 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      | 84°C /1kPa (183°F)                                      |
| g) Flash point                                  | 87°C (189°F)                                            |
| 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                             | 1.36                                                    |
| n) Water solubility                             | no data available                                       |
| o) Partition coefficient: n-octanol/water       | no data available                                       |

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|                              |                   |
|------------------------------|-------------------|
| 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

Open flame

### 10.5 Incompatible materials

Oxidizing agents

### 10.6 Hazardous decomposition products

Carbon dioxide, Carbon monoxide, Hydrogen fluoride

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

**Acute toxicity**

orl-rat LD50:5 g/kg ihl-rat LC50:1300 mg/m /4H 3

**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**

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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**

RTECS Number:MA3750500

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**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

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**SECTION 13:****13.1 Disposal considerations****Product**

Disposal of product: Recycle to process if possible. It is the generator's responsibility to comply with Federal, State and Local rules and regulations. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. This section is intended to provide assistance but does not replace these laws, nor does compliance in accordance with this section ensure regulatory compliance according to the law. US EPA guidelines for Identification and Listing of Hazardous Waste are listed in 40 CFR Parts 261. The product should not be allowed to enter the environment, drains, water ways, or the soil. Other considerations: Observe all federal, state and local regulations when disposing of the substance.

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#### Contaminated packaging

Disposal of container: Dispose of as unused product. Do not re-use empty containers.

## SECTION 14: Transport information

### DOT (US)

UN number: no data available

Packing group: no data available

Class: no data available

Proper shipping name: no data available

Reportable Quantity(RQ): no data available

Poison Inhalation Hazard: no data available

Environmental Hazards: no data available

### IMDG

UN number: no data available

Packing group: no data available

EMS-No: no data available

Proper shipping name: no data available

### IATA

UN number: no data available

Packing group: no data available

Class: no data available

Proper shipping name: no data available

## SECTION 15: Regulatory information

### Toxic Substance Control Act

This product is ON the EPA Toxic Substances Control Act (TSCA) inventory. US Federal Regulations

### US Federal Regulations

SARA 313: Not Listed

SARA 302: Not Listed

### State Regulations

Massachusetts Not Listed

New Jersey Not Listed

Pennsylvania Not Listed

### Other Information

NFPA Rating: HMIS Classification: Health: 2 Health: 2 Flammability: 2 Flammability: 2 Instability: 0 Physical: 0

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**International Inventories**

Canada: NDSL On NDSL

EC-No: 207-035-2

**SECTION 16: Other information****Prepared By**

Regulatory Affairs

ALADDIN SCIENTIFIC CORPORATION

Email: QualityAssurance@aladdinsci.com

**Creation Date**

13-Oct-2022

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19-Sep-2025

**Revision Summary**

SDS sections updated v1

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