

# SAFETY DATA SHEET

Version: v1

Revision Date: 2025-09-24

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

### 1.1 Product identifiers

Product name : 1,5-Difluoro-2,4-dinitrobenzene  
Product Number : D102470  
Brand : aladdin  
CAS-No. : 327-92-4

### 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 (Category 2), H300

Acute toxicity, inhalation (category 3), H331

Acute toxicity, transdermal (Category 3), H311

Specific target organ systemic toxicity (repeated exposure) (Category 2), H373

### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H300

Fatal if swallowed

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|                                   |                                                                                                          |
|-----------------------------------|----------------------------------------------------------------------------------------------------------|
| H373                              | Causes damage to organs through prolonged or repeated exposure                                           |
| H311+H331                         | Toxic in contact with skin or if inhaled.                                                                |
| <b>Precautionary statement(s)</b> |                                                                                                          |
| P260                              | Do not breathe 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.                               |
| P314                              | Get medical advice/attention if you feel unwell.                                                         |
| 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.                                       |
| P302+P352+P312                    | IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/ doctor if you feel unwell.                  |
| P301+P310+P330                    | IF SWALLOWED: Rinse mouth. Immediately call a POISON CENTER/doctor/.                                     |
| P304+P340+P311                    | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor. |

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

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

|                  |                                                                              |
|------------------|------------------------------------------------------------------------------|
| Synonyms         | : DFDNB                                                                      |
| Formula          | : C <sub>6</sub> H <sub>2</sub> F <sub>2</sub> N <sub>2</sub> O <sub>4</sub> |
| Molecular weight | : 204.09                                                                     |
| CAS No.          | : 327-92-4                                                                   |
| EC-NO.           | : 206-324-0                                                                  |

| Component                       | Classification    | Concentration |
|---------------------------------|-------------------|---------------|
| 1,5-Difluoro-2,4-dinitrobenzene | no data available | ≥97%          |

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General advice

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

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## 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 oxides hydrogen fluoride Flammable When caught on fire, it may cause the production 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

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## 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.

### 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

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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.

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## 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

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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

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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: powder, crystals, and/or chunks color: white to yellow |
| b) Odour                                        | no data available                                            |
| c) Odour Threshold                              | no data available                                            |
| d) pH                                           | no data available                                            |
| e) Melting point/freezing point                 | 72-74°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                             | 1.679                                                        |
| 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**

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**10.1 Reactivity**

no data available

**10.2 Chemical stability**

Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions**

Possible violent reactions may occur with it: alkali strong oxidizing agent

**10.4 Conditions to avoid**

no data available

**10.5 Incompatible materials**

no data available

**10.6 Hazardous decomposition products**

no data available

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

LD50 Oral - Rat -50 mg/kg

Note: Behavioral: Muscle weakness

Skin and accessories: Other: Hair.

LC50 inhalation -4 hours -0.51 mg/l

LD50 transdermal -300 mg/kg

**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

**Specific target organ toxicity - repeated exposure**

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no data available

**Aspiration hazard**

no data available

**Additional Information**

Registration of Toxic Effects of Chemical Substances: CZ5663200

Inhalation can cause the formation of methemoglobin in the human body, which can lead to pale skin disease at a certain concentration. It usually occurs after 2-4 hours or longer, and to our knowledge, the chemical, physical, and toxic properties of this have not been fully studied.

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**SECTION 12: Ecological information****12.1 Toxicity****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**

Dispose of as unused product.

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**SECTION 14: Transport information**

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**DOT (US)**

UN number: 2811

Packing group: II

Class: 6.1

Proper shipping name: Organic toxic solid, unspecified (1,5-difluoro-2,4-dinitrobenzene) (1,5-difluoro-2,4-dinitrobenzene)

Reportable Quantity(RQ): no data available

Poison Inhalation Hazard: no data available

Environmental Hazards: no

**IMDG**

UN number: 2811

Packing group: II

EMS-No: no data available

Proper shipping name: Organic toxic solid, unspecified (1,5-difluoro-2,4-dinitrobenzene) (1,5-difluoro-2,4-dinitrobenzene)

**IATA**

UN number: 2811

Packing group: II

Class: 6.1

Proper shipping name: Organic toxic solid, unspecified (1,5-difluoro-2,4-dinitrobenzene) (1,5-difluoro-2,4-dinitrobenzene)

**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](mailto:QualityAssurance@aladdinsci.com)
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**Revision Summary**

SDS sections updated v1

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