

# SAFETY DATA SHEET

Version: v3  
Revision Date: 2026-02-10  
Print Date: 2026-02-10

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

### 1.1 Product identifiers

Product name : 1,1-Diphenyl-2-picrylhydrazyl Free Radical (DPPH)  
Product Number : D1501121  
Brand : aladdin  
CAS-No. : 1898-66-4

### 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)

Self reactive substances and mixtures (Type C), H242

Acute Toxicity, Oral (Category 4), H302

Acute toxicity, inhalation (category 4), H332

Acute toxicity, transdermal (Class 4), H312

Skin Corrosion/Irritation (Category 2), H315

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

Respiratory allergy (category 1), H334

Skin allergy (category 1), H317

## 2.2 GHS Label elements, including precautionary statements

Pictogram



Danger

Signal word

Hazard statement(s)

H242

Heating may cause a fire

H315

Causes skin irritation

H317

May cause an allergic skin reaction

H319

Causes serious eye irritation

H334

May cause allergy or asthma symptoms or breathing difficulties if inhaled

H302+H312+H332

Harmful if swallowed, in contact with skin or if inhaled

Precautionary statement(s)

P210

Keep away from heat, hot surface, sparks, open flames and other ignition sources.  
- No smoking.

P220

Keep away from clothing and other combustible materials.

P234

Keep only in original container.

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.

P272

Contaminated work clothing should not be allowed out of the workplace.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P284

[In case of inadequate ventilation] Wear respiratory protection.

P305+P351+P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P333+P313

IF SKIN irritation or rash occurs: Get medical advice/attention.

P342+P311

IF experiencing respiratory symptoms: Call a POISON CENTER/doctor/...

P370+P378

In case of fire: Use ... to extinguish.

P420

Store separately.

P403+P233

Store in a well-ventilated place. Keep container tightly closed.

P302+P352+P312

IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/ doctor if you feel unwell.

P301+P312+P330

IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.

P304+P340+P312

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor. 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         | : 2,2-Diphenyl-1-picrylhydrazyl;DPPH Free Radical;DPPH |
| Formula          | : C18H12N5O6   |
| Molecular weight | : 394.32   |
| CAS No.          | : 1898-66-4  |
| EC-NO.           | : 217-591-8  |

| Component   | Classification    | Concentration |
|---|-------------------|---------------|
| 1,1-Diphenyl-2-picrylhydrazyl Free Radical (DPPH) |                   |               |
|   | no data available | ≥95%          |

## 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

## 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 Flammable Fire may evolve into: Nitrogen oxides, nitrous oxide gas 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

---

## 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

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

light sensitive;Heat sensitive , Store at -20 °C, away from light, and dry.

## 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 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: powder to crystal color: Green to Very Dark Green to Black |
| b) Odour  | no data available  |
| c) Odour Threshold                              | no data available  |
| d) pH   | no data available  |
| e) Melting point/freezing point                 | 138-141°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

Oxidizing agent, strong base

## 10.6 Hazardous decomposition products

no data available

---

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Oral: No data available

Acute toxicity estimate inhalation -1.6 mg/l - dust/smoke  
(Expert judgment)

Acute toxicity estimate transdermal -1100.1 mg/kg  
(Expert judgment)

#### 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**

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.

---

**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

---

**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: 3224  | Packing group: no data available           | Class: 4.1                                  |
| Proper shipping name: Self-reactive solid type C (2,2-DIPHENYL-1-PICRYLHYDRAZYL) | Reportable Quantity(RQ): no data available | Poison Inhalation Hazard: no data available |
| Environmental Hazards: no  |  |   |

**IMDG**

|  |                                  |                           |
|--|----------------------------------|---------------------------|
| UN number: 3224  | Packing group: no data available | EMS-No: no data available |
| Proper shipping name: Self-reactive solid type C (2,2-DIPHENYL-1-PICRYLHYDRAZYL) |                                  |                           |

**IATA**

|  |                                  |            |
|--|----------------------------------|------------|
| UN number: 3224  | Packing group: no data available | Class: 4.1 |
| Proper shipping name: Self-reactive solid type C (2,2-DIPHENYL-1-PICRYLHYDRAZYL) |                                  |            |

---

**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>    | 12-Dec-2025  |
| <b>Revision Date</b>    | 10-Feb-2026  |
| <b>Print Date</b>       | 10-Feb-2026  |
| <b>Revision Summary</b> | SDS sections updated v3  |



---

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.