

# SAFETY DATA SHEET

Version: v1

Revision Date: 2024-01-16

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

### 1.1 Product identifiers

Product name : 1,4-Dinitrobenzene  
Product Number : D100640  
Brand : aladdin  
CAS-No. : 100-25-4

### 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, Inhalation (Category 2), H330

Acute toxicity, Dermal (Category 1), H310

Acute toxicity, Oral (Category 2), H300

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

Short-term (acute) aquatic hazard (Category 1), H400

Long-term (chronic) aquatic hazard (Category 1), H410

### 2.2 GHS Label elements, including precautionary statements

Pictogram



Danger

Signal word

Hazard statement(s)

H314 Causes severe skin burns and eye damage  
H373 Causes damage to organs through prolonged or repeated exposure  
H410 Very toxic to aquatic life with long lasting effects  
H300+H310+H330 Fatal if swallowed, in contact with skin or if inhaled

Precautionary statement(s)

P260 Do not breathe dust/fume/gas/mist/vapors/spray.  
P262 Do not get in eyes, on skin, or on clothing.  
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.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P284 [In case of inadequate ventilation] Wear respiratory protection.  
P314 Get medical advice/attention if you feel unwell.  
P391 Collect spillage.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/...  
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303+P361+P353 IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower].  
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.  
P361+P364 Take off immediately all 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.

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

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Synonyms : p-Dinitrobenzene  
Formula : C<sub>6</sub>H<sub>4</sub>N<sub>2</sub>O<sub>4</sub>  
Molecular weight : 168.11  
CAS No. : 100-25-4

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EC-NO. : 202-833-7

| Component          | Classification                                                                                                                            | Concentration |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 1,4-Dinitrobenzene | Acute Tox. 2; Acute Tox. 1; STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H300, H330, H310, H373, H400, H410 M-Factor - Aquatic Acute: 1 | 98%           |

## 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. Move out of dangerous area.

If inhaled

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

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 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

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)

### 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

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## 5.4 Further information

no data available

## SECTION 6: Accidental release measures

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

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

### 6.2 Environmental precautions

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

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

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

## 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

Keep container tightly closed in a dry and well-ventilated place. Keep in a dry place.

### 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

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate

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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 gloves 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.

Body Protection

Complete suit protecting against chemicals, 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 full-face 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

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: Powder or Crystals color: Yellow to Brown |
| b) Odour                                        | no data available                               |
| c) Odour Threshold                              | no data available                               |
| d) pH                                           | no data available                               |
| e) Melting point/freezing point                 | 174°C                                           |
| f) Initial boiling point and boiling range      | 299°C                                           |
| g) Flash point                                  | 150 °C                                          |
| 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**

Hazardous decomposition products formed under fire conditions.- Carbon oxides, nitrogen oxides (NOx)

**10.6 Hazardous decomposition products**

no data available

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

Acute toxicity

LD50 Intraperitoneal - Rat - 56 mg/kg

Remarks: Blood:Methemoglobinemia-Carboxyhemoglobin.

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

Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

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Aspiration hazard

no data available

Additional Information

RTECS: CZ7525000

Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache

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## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 0,603 mg/l - 96 h

### 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

Very toxic to aquatic life.

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## SECTION 13:

### 13.1 Disposal considerations

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

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## SECTION 14: Transport information

DOT (US)

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|                                                 |                                               |                                                |
|-------------------------------------------------|-----------------------------------------------|------------------------------------------------|
| UN number: 3443                                 | Packing group: II                             | Class: 6.1                                     |
| Proper shipping name:<br>DINITROBENZENES, SOLID | Reportable Quantity(RQ): no data<br>available | Poison Inhalation Hazard: no data<br>available |
| Environmental Hazards: No<br>IMDG               |                                               |                                                |
| UN number: 3443                                 | Packing group: II                             | EMS-No: no data available                      |
| Proper shipping name: DINITROBENZENES, SOLID    |                                               |                                                |
| IATA                                            |                                               |                                                |
| UN number: 3443                                 | Packing group: II                             | Class: 6.1                                     |
| Proper shipping name: DINITROBENZENES, SOLID    |                                               |                                                |

## 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<br>ALADDIN SCIENTIFIC CORPORATION<br>Email: <a href="mailto:QualityAssurance@aladdinsci.com">QualityAssurance@aladdinsci.com</a> |
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| Revision Date    | 16-Jan-2024                                                                                                                                         |
| Print Date       | 23-Jan-2024                                                                                                                                         |
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