

# SAFETY DATA SHEET

Version: v1

Revision Date: 2025-09-14

Print Date: 2025-09-21

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

### 1.1 Product identifiers

Product name : Malonitrile  
Product Number : M104481  
Brand : aladdin  
CAS-No. : 109-77-3

### 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, Dermal (Category 3), H311

Eye irritation (Category 2), H319

Skin sensitization (Category 1), H317

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

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

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 2.2 GHS Label elements, including precautionary statements

**Pictogram****Signal word**

Danger

**Hazard statement(s)**

|      |                                                      |
|------|------------------------------------------------------|
| H301 | Toxic if swallowed                                   |
| H311 | Toxic in contact with skin                           |
| H331 | Toxic if inhaled                                     |
| H400 | Very toxic to aquatic life                           |
| H410 | Very toxic to aquatic life with long lasting effects |

**Precautionary statement(s)**

|           |                                                                            |
|-----------|----------------------------------------------------------------------------|
| 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.                            |
| P273      | Avoid release to the environment.                                          |
| P280      | Wear protective gloves/protective clothing/eye protection/face protection. |
| P321      | Specific treatment (see ... on this label).                                |
| P330      | Rinse mouth.                                                               |
| P391      | Collect spillage.                                                          |
| P302+P352 | IF ON SKIN: wash with plenty of water.                                     |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| 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.         |
| P301+P316 | IF SWALLOWED: Get emergency medical help immediately.                      |
| P316      | Get emergency medical help immediately.                                    |

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

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

|                  |                                                                             |
|------------------|-----------------------------------------------------------------------------|
| Synonyms         | : Dicyanomethane; Propanedinitrile; Methylene Cyanide; Methylene Dicyanide; |
| Formula          | : C <sub>3</sub> H <sub>2</sub> N <sub>2</sub>                              |
| Molecular weight | : 66.06                                                                     |
| CAS No.          | : 109-77-3                                                                  |
| EC-NO.           | : 203-703-2                                                                 |

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| Component   | Classification                                                                                                                                                                                  | Concentration |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Component   | Classification                                                                                                                                                                                  | Concentration |
| Malonitrile | Acute Tox. 2; Acute Tox. 3; Eye Irrit. 2; Skin Sens. 1; Aquatic Acute 1; Aquatic Chronic 1; H300, H331, H311, H319, H317, H400, H410 M-Factor - Aquatic Acute: 10 M-Factor - Aquatic Chronic: 1 | ≥99%          |

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General advice

First aider needs to protect himself. Show this material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

#### If swallowed

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.

### 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 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) Combustible. Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.

### 5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

### 5.4 Further information

Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## SECTION 6: Accidental release measures

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

Advice for non-emergency personnel: Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

### 6.2 Environmental precautions

Do not let product enter drains.

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

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

### 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

Work under hood. Do not inhale substance/mixture. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge. For precautions see section 2.2.

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

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons. Heat, Light & Air sensitive, -2-8 °C, filled with argon, stored in a dark place.

### 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

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

### 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). Safety glasses

#### 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

Flame retardant antistatic protective clothing.

#### Respiratory protection

required when dusts are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

#### Control of environmental exposure

Do not let product enter drains.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|                                                 |                                                                                 |
|-------------------------------------------------|---------------------------------------------------------------------------------|
| a) Appearance                                   | form: solid or liquid color: White to yellow or Orange or beige                 |
| b) Odour                                        | no data available                                                               |
| c) Odour Threshold                              | no data available                                                               |
| d) pH                                           | no data available                                                               |
| e) Melting point/freezing point                 | 32°C                                                                            |
| f) Initial boiling point and boiling range      | 218 ~ 219°C                                                                     |
| g) Flash point                                  | 112°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                             | 1.049                                                                           |
| n) Water solubility                             | Soluble in water, acetone, acetic acid, chloroform, ethanol, ether and benzene. |
| o) Partition coefficient: n-octanol/water       | no data available                                                               |
| p) Auto-ignition temperature                    | no data available                                                               |

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

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

2 Chemical stability The product is chemically stable under standard ambient conditions (room temperature) . Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

Do not heat over: 130°C Strong heating.

### 10.5 Incompatible materials

Strong oxidizing agents, Strong acids, Strong bases, Strong reducing agents Alkali metals, Nitrogen oxides (NOx)

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx) Other decomposition products - No data available In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male and female - 14 mg/kg

Remarks: (External MSDS)

#### Skin corrosion/irritation

Skin - Rabbit Result: Mild skin irritation - 4 h Remarks: (External MSDS)

#### Serious eye damage/eye irritation

Eyes - Rabbit Result: irritating Remarks: (External MSDS)

#### Respiratory or skin sensitisation

Maximization Test - Guinea pig Result: positive (OECD Test Guideline 406)

**Germ cell mutagenicity**

No data available Ames test Salmonella typhimurium Result: negative OECD Test Guideline 474 Mouse - Bone marrow Result: negative

**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**

RTECS: OO3150000

May be partially metabolized to cyanide in the body., The onset of symptoms is generally

delayed pending conversion to cyanide., Headache, Dizziness, Convulsions, Cyanosis,

Irregular breathing., Lung irritation, Central nervous system depression

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

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 0,56 mg/l - 96 h

Remarks: (External MSDS)

Toxicity to daphnia

and other aquatic

invertebrates

static test EC50 - Daphnia magna (Water flea) - 21,4 mg/l - 24 h

(OECD Test Guideline 202)

Toxicity to bacteria static test EC10 - Pseudomonas putida - 6 mg/l - 18 h

Remarks: (ECHA)

**12.2 Persistence and degradability**

no data available

**12.3 Bioaccumulative potential**

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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**

Dispose of the remaining and non recyclable solution to a licensed company.

**Contaminated packaging**

Dispose of as unused product.

**SECTION 14: Transport information****DOT (US)**

UN number: 2647

Packing group: II

Class: 6.1

Proper shipping name:

Reportable Quantity(RQ): no data  
availablePoison Inhalation Hazard: no data  
available

MALONONITRILE

Environmental Hazards: yes

**IMDG**

UN number: 2647

Packing group: II

EMS-No: no data available

Proper shipping name: MALONONITRILE

**IATA**

UN number: 2647

Packing group: II

Class: 6.1

Proper shipping name: MALONONITRILE

**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

**Creation Date**

27-Jan-2022

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|                         |                         |
|-------------------------|-------------------------|
| <b>Revision Date</b>    | 14-Sep-2025             |
| <b>Print Date</b>       | 21-Sep-2025             |
| <b>Revision Summary</b> | SDS sections updated v1 |

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