

Version: v1
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SAFETY DATA SHEET

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

1.1 Product identifiers

Product name : Malonitrile
Product Number : M141176
Brand : aladdin
CAS-No. : 109-77-3(methanol)

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company : Shanghai Aladdin Biochemical Tech Co., Ltd
Address : 36 Xinjinqiao Road, Shanghai
Telephone : 400-620-6333
Fax : no data available

1.4 Emergency telephone number

Emergency Phone : 0532-83889090

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Physical hazard

Flammable liquid Class 2

Health hazard

Acute toxicity (oral) grade 5

Serious damage/irritation to eyes Category 2A

Reproductive toxicity Category 1B

Specific target organ toxicity

-Single contact [Level 1]

Central Nervous System

Specific target organ toxicity

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-Single contact [Level 3]

Respiratory tract irritation, anesthesia

Specific target organ toxicity

-Single contact [Level 1]

Visual system central nervous system

2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal word	Danger
Hazard statement(s)	
H225	Highly Flammable liquid and vapor
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H360	May damage fertility or the unborn child
H370	Causes damage to organs
H372	Causes damage to organs through prolonged or repeated exposure
H301+H311+H331	Toxic if swallowed, in contact with skin or if inhaled
Precautionary statement(s)	
P201	Obtain special instructions before use.
P210	Keep away from heat, hot surface, sparks, open flames and other ignition sources. - No smoking.
P202	Do not handle until all safety precautions have been read and understood.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting/...] equipment.
P242	Use only non-sparking tools.
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.
P330	Rinse mouth.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/...
P301+P312	IF SWALLOWED: call a POISON CENTER/doctor/... IF you feel unwell.
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.
P308+P311	IF exposed or concerned: Call a POISON CENTER/doctor/...

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P337+P313	IF eye irritation persists: Get medical advice/attention.
P361+P364	Take off immediately all contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use ... to extinguish.
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
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

3.2 Mixtures

Synonyms	: Dicyanomethane; Propanedinitrile; Methylene Cyanide; Methylene Dicyanide		
Formula	: no data available		
Molecular weight	: no data available		
Component	Classification	Concentration	
Methanol			
CAS-No.: 67-56-1 EC-No.:	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301, H331, H311, H370 Concentration limits: >= 10 %: STOT SE 1, H370; 3 - < 10 %: STOT SE 2, H371		
Malonitrile			
CAS-No.: 109-77-3 EC-No.: 203-703-2	急性毒性 类别 2; 急性毒性 类别 3; 皮肤腐蚀/刺激 类别 3; 严重眼睛损伤/眼睛刺激性 类别 2A; 皮肤过敏 类别 1; 急性 (短期) 水生危害 类别 1; 长期水生危害 类别 1; H300, H331, H311, H316, H319, H317, H400, H410 M-因子 - Aquatic Acute: 10 M-因子 - Aquatic Chronic: 1		

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.
If inhaled If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact Remove/take off all contaminated clothing immediately. Wash gently with plenty of soap and water. Call the detoxification center/doctor.
In case of eye contact Flush eyes with water as a precaution.
If swallowed 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

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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

no data available

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

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

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions. Take up with liquid-absorbent material. Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

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Technical measures: Treat in a well-ventilated place. Wear suitable protective equipment. Prevent smoke generation. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Take measures to prevent static electricity from accumulating. Use explosion-proof equipment. Wash hands and face thoroughly after treatment. Note: If possible, use a closed system. If vapor or aerosol is generated, use ventilation and local exhaust. Handling precautions: Avoid contact with all parts!

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Store in a cool, dark, well-ventilated place. The storage place must be locked. Store away from incompatible materials such as oxidizers. Storage temperature -20°C

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

Eyeface 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

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9.1 Information on basic physical and chemical properties

a) Appearance	no data available
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	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

Sparks, open flames, static electricity

10.5 Incompatible materials

Oxidizing agent, acid chloride, acid anhydride, reducing agent

10.6 Hazardous decomposition products

Carbon dioxide, carbon monoxide

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

ihl-hmn TCLo:86000 mg/m³

ihl-rat LC50:64000 ppm/4H

orl-hmn LDLo:143 mg/kg

orl-rat LD50:5600 mg/kg

skn-rbt LD50:15800 mg/kg

Skin corrosion/irritation

skn-rbt 20 mg/24H MOD

Serious eye damage/eye irritation

eye-rbt 100 mg/24H MOD

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

dni-hmn-lym 300 mmol/L mmo-mus-lym 7900 mg/L (+S9) mmo-smc 12 pph (-S9)

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

SECTION 12: Ecological information

12.1 Toxicity

Fish: 48h LC50: 1400 mg/L (*Oryzias latipes*)

96h LC50: 20100 mg/L (*Oncorhynchus mykiss*)

Crustaceans: 48h EC50: 24500 mg/L (*Daphnia magna*)

Algae: Not available

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Residuality/degradability: 92% (by BOD), 100% (by GC), 99% (by TOC)

Bioaccumulation Potential (BCF): <10

Mobility in soil

Log Pow:: -0.82/-0.66

Soil absorption coefficient (Koc): 2.75

Henry's Law

constant(PaM 3

/mol):

0.46

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)

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UN number: 1230	Packing group: II	Class: 3
Proper shipping name: Methanol	Reportable Quantity(RQ): no data available	Poison Inhalation Hazard: no data
Environmental Hazards: no data available		

IMDG

UN number: 1230	Packing group: II	EMS-No: no data available
Proper shipping name: Methanol		

IATA

UN number: 1230	Packing group: II	Class: 3
Proper shipping name: Methanol		

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

SECTION 16: Other information

Further information

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