

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Diethyl malonate
Product Number : M5629
Brand : Sigma
Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Malonic acid diethyl ester
Formula : $C_7H_{12}O_4$
Molecular Weight : 160.17 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Diethyl malonate			
105-53-3	203-305-9	-	-

3. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Combustible Liquid

HMIS Classification

Health Hazard: 0

Flammability: 2

Physical hazards: 0

NFPA Rating

Health Hazard: 0

Fire: 2

Reactivity Hazard: 0

Potential Health Effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Ingestion May be harmful if swallowed.

4. FIRST AID MEASURES

General advice

Move out of dangerous area.

If inhaled

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

In case of skin contact

Wash off with soap and plenty of water.

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.

5. FIRE-FIGHTING MEASURES

Flammable properties

Flash point 90 °C (194 °F) - closed cup

Ignition temperature no data available

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Avoid breathing vapors, mist or gas.

Environmental precautions

Do not let product enter drains.

Methods for cleaning up

Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Storage

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment**Respiratory protection**

Respiratory protection is not required. Where protection is desired, use multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

For prolonged or repeated contact use protective gloves.

Eye protection

Safety glasses with side-shields conforming to EN166

Hygiene measures

General industrial hygiene practice.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Form liquid
Colour colourless

Safety data

pH no data available
Melting point -51 - -50 °C (-60 - -58 °F) - lit.
Boiling point 199 °C (390 °F) - lit.
Flash point 90 °C (194 °F) - closed cup
Ignition temperature no data available
Lower explosion limit no data available
Upper explosion limit no data available
Vapour pressure 1 hPa (1 mmHg) at 40 °C (104 °F)
Density 1.055 g/mL at 25 °C (77 °F)
Water solubility no data available
Relative vapour density 5.53
- (Air = 1.0)

10. STABILITY AND REACTIVITY**Storage stability**

Stable under recommended storage conditions.

Materials to avoid

acids, Bases, Oxidizing agents, Reducing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

LD50 Oral - mouse - 6,400 mg/kg
LD50 Dermal - rabbit - > 16,880 mg/kg

Irritation and corrosion

Skin - rabbit - Mild skin irritation - 24 h

Sensitisation

no data available

Chronic exposure

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Potential Health Effects

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.
Ingestion	May be harmful if swallowed.

Additional Information

RTECS: OO0700000

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

no data available

Ecotoxicity effects

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 10.8 mg/l - 96 h

Further information on ecology

no data available

13. DISPOSAL CONSIDERATIONS

Product

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

NA-Number: 1993 Class: CBL Packing group: III
Proper shipping name: Combustible liquid, n.o.s. (Diethyl malonate)
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION**OSHA Hazards**

Combustible Liquid

DSL Status

All components of this product are on the Canadian DSL list.

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Fire Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

Diethyl malonate

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105-53-3

Revision Date

New Jersey Right To Know Components

Diethyl malonate

CAS-No.

105-53-3

Revision Date

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

16. OTHER INFORMATION**Further information**

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