

SAFETY DATA SHEET



Handelsname: Diethyl malonate

Print Date: 6. January 2021

Version: 3.3, revision date: 02.01.2021

Replaced version: 3.2 created on: 15.03.2019

Region: EN

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

1.1. Product identifier

Product name / Trade name

Diethyl malonate

Substance name

Diethyl malonate

REACH Registration Number

01-2119886972-18

Identification Number

CAS-No.

105-53-3

EC-No.

203-305-9

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

Recommended use

Intermediate

Uses advised against

No data available.

1.3. Details of the supplier of the safety data sheet

Company

SysKem Chemie GmbH

Brucknerweg 26

D-42289 Wuppertal

Telephone

+49 (0) 202/30999510

Telefax

+49 (0) 202/87088403

E-mail address

info@syskem.de

Prepared by / E-mail address of person responsible for the SDS

info@syskem.de

1.4. Emergency telephone number

Vergiftungs-Informationen-Zentrale Freiburg, Tel. +49 761 19240.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Serious eye damage/eye irritation, Category 2; H319

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Causes serious eye irritation.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS07



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Signal word (CLP)

Warning

Hazard statements (CLP)

H319 - Causes serious eye irritation.

Precautionary statements (CLP)

P280 - Wear eye protection, face 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.

P337+P313 - If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients**3.1. Substances**

Substance name	Diethyl malonate
REACH Registration Number	01-2119886972-18-0016

Identification Number

CAS-No.	105-53-3
EC-No.	203-305-9

SECTION 4: First aid measures**4.1. Description of first aid measures****General advice:**

In all cases of doubt, or when symptoms persist, seek medical attention.

If inhaled:

Remove person to fresh air and keep comfortable for breathing.

In case of skin contact:

Wash skin with plenty of water.

In case of eye contact:

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

If swallowed:

Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.



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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water spray. Dry powder. Foam. Carbon dioxide. Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media:

Strong water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire:
Toxic fumes may be released. Carbon monoxide. Carbon dioxide.

5.3. Advice for firefighters

Firefighting instructions:

Cool closed containers exposed to fire with water spray.

Special protective equipment for firefighters

Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus.
Complete protective clothing.

Other information

Do not allow run-off from fire fighting to enter drains or water courses. Disposal must be done according to official regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Emergency procedures

Ventilate spillage area. Avoid contact with skin and eyes.

For emergency responders

Protective equipment

Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid sub-soil penetration. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up:

Cover spill with non combustible material, e.g.: sand/earth. Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.

Other information

Disposal must be done according to official regulations.

6.4. Reference to other sections

Information for safe handling. See section 7. Concerning personal protective equipment to use, see section 8. For further information refer to section 13.



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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling

Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.

Advice on protection against fire and explosion

Normal measures for preventive fire protection.

Hygiene measures

Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions

Store in a well-ventilated place. Keep cool. Protect from moisture.

Incompatible products

Acids. Strong bases. Oxidizing agent.

Heat and ignition sources

Keep away from heat and direct sunlight. Keep away from sources of ignition.

Information about storage in one common storage facility

Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

No additional information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

No additional information available.

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:

Chemically resistant protective gloves. Butyl rubber. EN 374. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Please follow the instructions related to the permeability and the penetration time provided by the manufacturer. Gloves must be replaced after each use and whenever signs of wear or perforation appear.

Eye protection:

Wear closed safety glasses. EN 166

Skin and body protection:

Wear suitable protective clothing. EN 340. EN 13034

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Filter type: A-P2. EN 143. . Breathing equipment is only to be used in order to handle the residual risk of short term jobs if all other risk minimizing measures have been carried out e.g. retention and/or local exhaust

Environmental exposure controls:

Avoid release to the environment.



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SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state	: Liquid
Colour	: colourless.
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: 197 °C (OECD 103 method)
Flash point	: 90 °C (Closed cup; Test method EU A.9)
Auto-ignition temperature	: 435 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: 0.36 hPa (25°C; (OECD 104 method))
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.055 g/cm ³ (20°C; (OECD 109 method))
Solubility	: Water: 23.2 g/l (37°C; (OECD 105 method))
Log Pow	: 0.96 (OECD 107 method)
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Product is not explosive. Explosive vapour/air mixtures may be formed.
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available.

SECTION 10: Stability and reactivity**10.1. Reactivity**

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Explosive vapour/air mixtures may be formed.

10.4. Conditions to avoid

All heat sources, including direct sunlight. Ignition sources.

10.5. Incompatible materials

Acids. Strong bases. Oxidizing agent. Reducing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.



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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)

Not classified (Based on available data, the classification criteria are not met)

diethyl malonate (105-53-3)

LD50 oral rat 15794 mg/kg bodyweight

Acute toxicity (dermal)

Not classified (Based on available data, the classification criteria are not met)

Acute toxicity (inhalation)

Not classified (Based on available data, the classification criteria are not met)

Skin corrosion/irritation

Not classified (Based on available data, the classification criteria are not met)

Serious eye damage/eye irritation

Causes serious eye irritation.

Additional information

Irritating to rabbits on ocular application

Respiratory or skin sensitisation

Not classified (Based on available data, the classification criteria are not met)

Additional information

(OECD 406 method)

Germ cell mutagenicity

Not classified (Based on available data, the classification criteria are not met)

Carcinogenicity

Not classified (Based on available data, the classification criteria are not met)

Reproductive toxicity

Not classified (Based on available data, the classification criteria are not met)

STOT - single exposure

Not classified (Based on available data, the classification criteria are not met)

STOT - repeated exposure

Not classified (Based on available data, the classification criteria are not met)

Aspiration toxicity

Not classified (Based on available data, the classification criteria are not met)

SECTION 12: Ecological information

12.1 Toxicity

Acute aquatic toxicity

Not classified (Based on available data, the classification criteria are not met)

Chronic aquatic toxicity

Not classified (Based on available data, the classification criteria are not met)

diethyl malonate (105-53-3)

EC50 Daphnia 1 202.3 mg/l (48h; Daphnia magna)

ErC50 (algae) 508.2 mg/l (72h; Desmodesmus subspicatus)



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12.2 Persistence and degradability

Persistence and degradability	Readily biodegradable.
Biodegradation	99 % (21d)

12.3 Bioaccumulative potential

Log Pow	0.96 (OECD 107 method)
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12.4 Mobility in soil

Surface tension	30.56 mN/m (30°C; Test method EU A.5)
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12.5 Results of PBT and vPvB assessment

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6 Other adverse effects

No additional information available.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

Disposal must be done according to official regulations. European waste catalogue. Do not dispose of with domestic waste. Do not discharge into drains or the environment.

SECTION 14: Transport information**14.1 UN number**

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.



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SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

No REACH Annex XVII restrictions

Diethyl malonate is not on the REACH Candidate List

Diethyl malonate is not on the REACH Annex XIV List

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Full text of H- and EUH-statements

H319 Causes serious eye irritation.

Data sources

ECHA (European Chemicals Agency).