

Material Safety Data Sheet
according to Regulation (EC) No. 1907/2006

MALONIC ACID

Revision date 04.03.2025
Version 1
Replaces version from -

1. Identification of the substance/Mixture and of the company/undertaking

1.1 Product identifier

Product name Malonic acid
CAS-No. 141-82-2
EC-No. 205-503-0
REACH No. 01-2120115885-52-XXXX

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

Name Valsynthese SA
Factory address Valsynthese SA
Fabrikstrasse 48
PO Box 636
3900 Brig / Switzerland
Office address Valsynthese SA
Societe Suisse des Explosifs Group
PO Box 636
3900 Brig / Switzerland

Information Departement This number is available only during office hours.
Phone +41 27 922 71 11
E-Mail (Responsible person):
msds@sse-group.com

1.4 Emergency Phone Number +41 27 922 71 11 (only during office hours) or
Toxicological Information Centre in Switzerland: Tel. 145
or +41 (0) 44 251 51 51

2. Hazards Identification

2.1 Classification of the substance or mixture

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

Serious eye damage (Category 1), H318

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

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Hazard pictogram(s)



Signal word Danger

Hazard statement(s)

H318

Causes serious eye damage.

Precautionary statement(s)

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.

Supplemental Hazard Statements

none

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

3. Composition / Information on ingredients

3.1 Substance

Synonyms	Propanedioic acid
Product name	Malonic acid
Molecular formula	C ₃ H ₄ O ₄
Molecular weight	104,06 g/mol
CAS-No.	141-82-2
EC-No.	205-503-0

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
Malonic acid		
CAS-No. 141-82-2 EC-No. 205-503-0	Eye Dam. 1; H318	<=100%

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

4. First-aid measures

4.1 Description of first aid measures

General advice	Show this material safety data sheet to the doctor in attendance.
If swallowed	After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.
If inhaled	After inhalation: fresh air.
In case of skin contact	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.
In case of eye contact	After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

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

5. Fire fighting measures

5.1 Extinguishing media

Suitable extinguishing media Water, Foam, Carbon dioxide (CO₂), Dry powder.

Unsuitable extinguishing media For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

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 fire fighters

In the event of fire, wear self-contained breathing apparatus.

5.4 Additional information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and material for containment and cleaning up

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

6.4 Reference to other sections

For further and detailed information see section 8 and 13.

7. Handling and storage

7.1 Precautions for safe handling

For precautions see section 2.2.



7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Dry.

Storage class

Storage class (TRGS 510): 11: Combustible Solids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8. Exposure controls / Personal protection

8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure controls

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). Tightly fitting safety goggles.
Skin protection	<p>This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).</p> <p>Full contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested: KCL 741 Dermatril® L</p> <p>This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).</p> <p>Splash contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested: KCL 741 Dermatril® L</p>
Body Protection	protective clothing.
Respiratory protection	<p>required when dusts are generated.</p> <p>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.</p> <p>Recommended Filter type: Filter type P2.</p>



	The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.
Environmental exposure controls	Do not let product enter drains.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	powder
Color	white
Odor	odorless
pH value	No data available
Melting point/freezing point	Melting point/range: 132 - 135 °C - dec.
Initial boiling point and boiling range	215 °C at 18,66 hPa (decomposition)
Flash point	157 °C - c.c.
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	0,002 hPa at 25 °C
Density	1,6 g/cm ³
Relative density	1,03 at 20 °C - Regulation (EC) No. 440/2008, Annex, A.3
Water solubility	No 766 g/l at 20 °C - Regulation (EC) No. 440/2008, Annex, A.6
Partition coefficient: n-octanol/water	log Pow: -0,81 - Bioaccumulation is not expected., (Lit.)
Auto-ignition temperature	No data available
Decomposition temperature	> 140 °C
Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
Particle characteristics	No data available
Explosive properties	No data available
Oxidizing properties	none



9.2 Other information

No data available

10. Stability and reactivity

10.1 Reactivity

Forms explosive mixtures with air on intense heating.

A range from approx. 15 Kelvin below the flash point is to be rated as critical.

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Violent reactions possible with:

alkalines

Strong oxidizing agents

Aluminum

Iron

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

Bases, Oxidizing agents, Reducing agents.

10.6 Hazardous decomposition products

In the event of fire: see section 5

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity	LD50 Oral - Rat - male - 3.250 mg/kg (OECD Test Guideline 401) Symptoms: Possible damages:, mucosal irritations Dermal: No data available
Skin corrosion/irritation	Skin - Rabbit Result: No skin irritation - 4 h Remarks: (ECHA)
Serious eye damage/eye irritation	Eyes - Human Result: Causes serious eye damage. (OECD Test Guideline 492)
Respiratory or skin sensitisation	Local lymph node assay (LLNA) - Mouse Result: negative (OECD Test Guideline 429)



Germ cell mutagenicity	<p>Test Type: Ames test Test system: <i>S. typhimurium</i> Metabolic activation: with and without metabolic activation Result: negative Remarks: (National Toxicology Program) Test Type: sister chromatid exchange assay Test system: Chinese hamster lung cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative</p> <p>Test Type: Genotoxicity in vivo Species: Rat Cell type: Liver cells Application Route: Oral Result: negative Remarks: (ECHA)</p>
Carcinogenicity	No data available
Reproductive toxicity	No data available
STOT-single exposure	No data available
STOT-repeated exposure	No data available
Aspiration hazard	No data available

Additional information

Endocrine disrupting properties

Product (Assessment):

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Repeated dose toxicity - Rat - male - Oral - 52 Days - NOAEL (No observed adverse effect level) - 100 mg/kg.

RTECS: 000175000

Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

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

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

12. Ecological information

12.1 Toxicity

Toxicity to fish flow-through test LC50 - *Oryzias latipes* - > 95,4 mg/l - 96 h (OECD Test Guideline 203)



14.4 Packing group

ADR/RID: -

IMDG: -

IATA: -

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user

No data available

Further information

Not classified as dangerous in the meaning of transport regulations.

15. Regulatory information

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

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

Other regulations

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

16. Other information

16.1 Information regarding the revision of the safety data sheet

Data compared to the previous version altered.

16.2 Full text of H-Statements referred to under sections 2 and 3

H318

Causes serious eye damage

16.3 Additional information

The information contained herein is in conformity with EU Directive EC 1907/2006 and EC 1272/2008, and is believed to be accurate and represents the best information currently available to us on the date of publication. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Valsynthese SA be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Valsynthese SA has been advised of the possibility of such damages.

