

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

SUCCINIC ACID

Revision date 05.03.2025
Version 1
Replaces version from -

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

1.1 Product identifier

Product name Succinic acid
CAS-No. 110-15-6
EC-No. 203-740-4
REACH No. 01-2119896114-34-XXXX

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

Identified uses

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.

3. Composition / Information on ingredients

3.1 Substance

| | |
|-------------------|----------------------------------------------|
| Product name | Succinic acid |
| Molecular formula | C ₄ H ₆ O ₄ |
| Molecular weight | 118.09 g/mol |
| CAS-No. | 110-15-6 |
| EC-No. | 203-740-4 |



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

| Component | Classification | Concentration |
|----------------------|----------------|------------------|
| Succinic acid | | |
| CAS-No. | 110-15-6 | Eye Dam. 1; H318 |
| EC-No. | 203-740-4 | |
| | | <=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 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 (CO ₂), 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.
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.

Recommended storage temperature see product label.

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

Contains no substances with occupational exposure limit values.



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 EN374 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 EN374 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> <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.</p> |
| 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 | solid |
| Color | white |
| Odor | odorless |



| | |
|----------------------------------------------|----------------------------------------------------------------------------------|
| pH value | 2.7 at 10 g/l at 20 °C |
| Melting point/freezing point | Melting point: 188 °C |
| Initial boiling point and boiling range | 235 °C at 1,013 hPa |
| Flash point | Not applicable |
| Evaporation rate | No data available |
| Flammability (solid, gas) | No data available |
| Upper/lower flammability or explosive limits | No data available |
| Vapour pressure | No data available |
| Density | 1.57 g/cm ³ at 25 °C |
| Relative density | No data available |
| Water solubility | 83 g/l at 25 °C - completely soluble |
| Partition coefficient: n-octanol/water | No data available |
| Auto-ignition temperature | > 220 °C - Relative self-ignition temperature for solids does not ignite |
| Decomposition temperature | No data available |
| 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 | |
| Bulk density | 940 kg/m ³ |
| Dissociation constant | 4.67 at 20 °C - OECD Test Guideline 112 |

10. Stability and reactivity

10.1 Reactivity

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:
strong oxidising agents
bases

10.4 Conditions to avoid

no information available

10.5 Incompatible materials

No data available

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 and female - > 6,740 mg/kg (OECD Test Guideline 401) Remarks: The value is given in analogy to the following substances: Butanedioic acid, sodium salt (1:1) LC50 Inhalation - Rat - male and female - 4 h - > 1.284 mg/l - dust/mist (OECD Test Guideline 403) Remarks: The value is given in analogy to the following substances: fumaric acid Dermal: No data available |
| Skin corrosion/irritation | Skin - Rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404) |
| Serious eye damage/eye irritation | Eyes - Rabbit Result: Irreversible effects on the eye - 24 h (OECD Test Guideline 405) |
| Respiratory or skin sensitisation | Maximization Test - Guinea pig Result: negative (OECD Test Guideline 406) |
| Germ cell mutagenicity | No data available |
| 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 and female - Oral - 13 Weeks - NOAEL (No observed adverse effect level) - 860 mg/kg.

Remarks: The value is given in analogy to the following substances: Butanedioic acid, sodium salt (1:1)

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

12. Ecological information

12.1 Toxicity

| | |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Toxicity to fish | semi-static test LC50 - Danio rerio (zebra fish) > 100 mg/l - 96 h (OECD Test Guideline 203) |
| Toxicity to daphnia and other aquatic invertebrates | semi-static test EC50 - Daphnia magna (Water flea) > 100 mg/l - 48 h (OECD Test Guideline 202) |
| Toxicity to algae | static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 46.8 mg/l - 72 h (OECD Test Guideline 201) |
| Toxicity to bacteria | static test EC50 - activated sludge - > 300 mg/l - 3 h (OECD Test Guideline 209) |

12.2 Persistence and degradability

| | |
|------------------|--------------------------------------------------------------------------------------------------------|
| Biodegradability | aerobic - Exposure time 28 d Result: 96.55 % - Readily biodegradable. (OECD Test Guideline 301E) |
|------------------|--------------------------------------------------------------------------------------------------------|

12.3 Bioaccumulation potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

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.



12.6 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.

12.7 Other adverse effects

Biological effects:

Harmful effect due to pH shift.

Discharge into the environment must be avoided.

13. Disposal considerations

13.1 Waste treatment methods

Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. Notice Directive on waste 2008/98/EC.

14. Transport information

14.1 UN Number

ADR/RID: -

IMDG: -

IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous
goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: -

IMDG: -

IATA: -

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.

