

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 14.11.2023

Version number 19 (replaces version 18)

Revision: 14.11.2023

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

· 1.1 Product identifier

· Product name: **Vario Ascorbic Acid**

· Catalog number: 00541109, 541100, 4541100

· CAS No.:
50-81-7

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

· Application of the substance / the preparation: Reagent for water analysis

· 1.3 Details of the supplier of the safety data sheet

· Supplier:

Tintometer GmbH
Schleefstraße 8-12
44287 Dortmund
Made in Germany
www.lovibond.com

phone: +49 (0)231 94510-0
e-mail: sales@lovibond.com

The Tintometer Limited
Lovibond® House
Sun Rise Way
Amesbury
Wiltshire SP4 7GR
United Kingdom

phone : +44 1980 664800
e-mail: SDS@lovibond.uk

· Informing department:
e-mail: sds@lovibond.com
Product Safety Department

· 1.4 Emergency telephone number:
+44 1235 239670
Languages: English

SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture

· Classification according to Regulation (EC) No 1272/2008
The substance is not classified, according to the GB CLP regulation.

· 2.2 Label elements

· Labelling according to Regulation (EC) No 1272/2008 Void
· Hazard pictograms Void
· Signal word Void
· Hazard statements Void

· 2.3 Other hazards No further relevant information available.

· Results of PBT and vPvB assessment

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

· Determination of endocrine-disrupting properties

The product does not contain substances with endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

· 3.1 Substances

· CAS No. Designation:
CAS: 50-81-7 ascorbic acid

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- **Identification number(s):**
- **EC No:** 200-066-2

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information** Instantly remove any clothing soiled by the product.
- **After inhalation** Supply fresh air.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- **After eye contact**
Rinse opened eye for several minutes under running water (at least 15 min). If symptoms persist, consult doctor.
- **After swallowing**
Rinse out mouth and then drink 1-2 glasses of water.
In case of persistent symptoms consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed:**
after swallowing:
general feeling of sickness
gastric or intestinal trouble
diarrhoea
- **4.3 Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents** Water, Carbon dioxide (CO₂), Foam, Fire-extinguishing powder
- **For safety reasons unsuitable extinguishing agents**
For this substance / mixture no limitations of extinguishing agents are given.
- **5.2 Special hazards arising from the substance or mixture**
combustible
Formation of toxic gases is possible during heating or in case of fire.
Carbon monoxide (CO) and carbon dioxide (CO₂)
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
- **Additional information**
Collect contaminated fire fighting water separately. It must not enter drains.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Ambient fire may liberate hazardous vapours.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
- **Advice for non-emergency personnel:** Avoid breathing dust.
- **Advice for emergency responders:** Protective equipment: see section 8
- **6.2 Environmental precautions:** Do not allow product to reach sewage system or water bodies.
- **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Collect mechanically.
Dispose of contaminated material as waste according to item 13.
- **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
- **Advice on safe handling:** Provide suction extractors if dust is formed.
- **Hygiene measures:**
The usual precautionary measures should be adhered to general rules for handling chemicals.

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Do not eat, drink or smoke when using this product.
Wash hands during breaks and at the end of the work.

- **7.2 Conditions for safe storage, including any incompatibilities**
 - **Requirements to be met by storerooms and containers:** Store in cool location.
 - **Information about storage in one common storage facility:** see chapter 10
 - **Further information about storage conditions:**
Store in cool, dry conditions in well sealed containers.
Protect from heat and direct sunlight.
Protect from the effects of light.
Protect from humidity and keep away from water.
This product is hygroscopic.
 - **Recommended storage temperature:** 20°C +/- 5°C
 - **7.3 Specific end use(s)** No further relevant information available.
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SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
 - **Components with limit values that require monitoring at the workplace:** Not required.
 - **Additional information:** The lists that were valid during the compilation were used as basis.
 - **8.2 Exposure controls**
 - **Engineering measures:**
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.
See item 7.
 - **Individual protection measures, such as personal protective equipment**
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.
 - **Eye/face protection**
Safety glasses
use against the effects of fumes / dust
Use safety glasses that have been tested and approved in accordance with government standards such as EN 166.
 - **Hand protection**
Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.
 - **Material of gloves**
nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.11 mm
 - **Penetration time of glove material**
Value for the permeation: Level = 1 (< 10 min)
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
 - **Other skin protection (body protection):** Protective work clothing.
 - **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
 - **Recommended filter device for short term use:** Filter P1
 - **Environmental exposure controls** Do not allow product to reach sewage system or water bodies.
-

SECTION 9: Physical and chemical properties

- | | |
|---|----------------------------------|
| 9.1 Information on basic physical and chemical properties | |
| · Physical state | Solid. |
| · Form: | Powder |
| · Colour: | White |
| · Odour: | Odourless |
| · Odour threshold: | Not applicable. |
| · Melting point/Freezing point: | 190–192°C |
| · Boiling point or initial boiling point and boiling range | Not applicable.
Decomposition |

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· Flammability	combustible
· Explosive properties:	Product is not explosive. The following applies in general to flammable organic substances / preparations: Dust explosion possible if in powder or granular form (fine distribution), mixed with air.
· Lower and upper explosion limit	
Lower:	Not determined.
Upper:	Not applicable (solid).
· Flash point:	Not applicable.
· Auto-ignition temperature:	380°C
· Decomposition temperature:	> 190°C
· pH (50 g/l) at 20°C	2.2-2.5
· Kinematic viscosity	Not applicable (solid).
· Solubility	
· Water at 20°C:	333 g/l Readily soluble
· Partition coefficient n-octanol/water (log value)	-2.15 log POW
· Vapour pressure:	Not applicable (solid).
· Density and/or relative density	
· Density at 20°C:	1.65 g/cm ³
· Relative density:	Not determined.
· Relative gas density	Not applicable (solid).
· Particle characteristics	Not determined.
· 9.2 Other information	
· Information with regard to physical hazard classes	
· Corrosive to metals	Void
· Other safety characteristics	
· Oxidising properties:	none
· Additional information	
· Solids content:	100 %
· Molecular formula	C ₆ H ₈ O ₆ (M= 176.12 g/mol)

SECTION 10: Stability and reactivity

- **10.1 Reactivity** Dust can combine with air to form an explosive mixture.
- **10.2 Chemical stability**
Stable at ambient temperature (room temperature).
sensitivity to light
sensitive to air
sensitive to moisture
- **10.3 Possibility of hazardous reactions**
Aqueous solution reacts acidic.
Reacts with oxidizing agents
- **10.4 Conditions to avoid** Strong heating (decomposition)
- **10.5 Incompatible materials:** aluminium, copper, zinc, metal ions
- **10.6 Hazardous decomposition products:** see section 5

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values that are relevant for classification:**

CAS: 50-81-7 ascorbic acid

Oral	LD50	11900 mg/kg (rat) (RTECS)
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- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.

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· Information on components:		
CAS: 50-81-7 ascorbic acid		
Irritation of skin	OECD 404	(rabbit: no irritation)
Irritation of eyes	OECD 405	(rabbit: slight irritation)
· Respiratory or skin sensitisation Based on available data, the classification criteria are not met.		
· Germ cell mutagenicity Based on available data, the classification criteria are not met.		
· Carcinogenicity Based on available data, the classification criteria are not met.		
· Reproductive toxicity Based on available data, the classification criteria are not met.		
· STOT (specific target organ toxicity) -single exposure Based on available data, the classification criteria are not met.		
· STOT (specific target organ toxicity) -repeated exposure Based on available data, the classification criteria are not met.		
· Aspiration hazard Based on available data, the classification criteria are not met.		
· Additional toxicological information: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.		
· 11.2 Information on other hazards		
· Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.		
· Other information No further relevant information available.		

SECTION 12: Ecological information

· 12.1 Toxicity		
· Aquatic toxicity:		
CAS: 50-81-7 ascorbic acid		
EC50	360 mg/l/48h (Daphnia magna)	
IC50	1750 mg/l/72h (Desmodesmus subspicatus)	
LC50	1020 mg/l/96h (rainbow trout) (OECD 203)	
· Bacterial toxicity:		
CAS: 50-81-7 ascorbic acid		
EC50	140 mg/l (Pseudomonas putida) (16h)	
· 12.2 Persistence and degradability		
CAS: 50-81-7 ascorbic acid		
OECD 302 B	97 % / 5 d (readily eliminated from water) (Zahn-Wellens / EMPA Test)	
· Other information: The product is biodegradable. Easily eliminable from water.		
· 12.3 Bioaccumulative potential Pow = n-octanol/wasser partition coefficient log Pow < 1 = Does not accumulate in organisms.		
CAS: 50-81-7 ascorbic acid		
log Pow	-2.15 (.)	
· 12.4 Mobility in soil No further relevant information available.		
· 12.5 Results of PBT and vPvB assessment Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.		
· 12.6 Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.		
· 12.7 Other adverse effects Avoid transfer into the environment.		
· Water hazard: Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system. Must not reach sewage water or drainage ditch undiluted or unneutralised.		

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods	
· Recommendation Disposal must be made according to official regulations.	

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Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue	
16 05 09	discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

· 14.1 UN number or ID number · ADR, IMDG, IATA	Void
· 14.2 UN proper shipping name · ADR, IMDG, IATA	Void
· 14.3 Transport hazard class(es) · ADR, IMDG, IATA · Class	Void
· 14.4 Packing group · ADR, IMDG, IATA	Void
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user	Not applicable.
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.

SECTION 15: Regulatory information

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

- **Poisons Act UK**

· Regulated explosives precursors
Substance is not listed.
· Regulated poisons
Substance is not listed.
· Reportable explosives precursors
Substance is not listed.
· Reportable poisons
Substance is not listed.
· Regulation (EU) 2019/1148 on the marketing and use of explosives precursors not regulated
· Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)
Substance is not listed.
· Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports of dual-use items and technology:
Substance is not listed.
· Regulation (EC) No 273/2004 on drug precursors
Substance is not listed.
· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors
Substance is not listed.
· Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:
Substance is not listed.

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· REGULATION (EU) 2019/1021 on persistent organic pollutants (POP) Substance is not listed.
· LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV) Substance is not listed.
· Substances of very high concern (SVHC) according to REACH, Article 57 This product does not contain any substances of very high concern above the legal concentration limit of $\geq 0.1\%$ (w / w).
· Substances of very high concern (SVHC) according to UK REACH This product does not contain any substances of very high concern above the legal concentration limit of $\geq 0.1\%$ (w / w).
· Directive 2012/18/EU (SEVESO III):
· Named dangerous substances - ANNEX I Substance is not listed.
· Information about limitation of use: Not required.
· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

· **Training hints** Provide adequate information, instruction and training for operators.

· **Abbreviations and acronyms:**

OECD: Organisation for Economic Co-operation and Development

STOT: specific target organ toxicity

SE: single exposure

RE: repeated exposure

EC50: half maximal effective concentration

IC50: half maximal inhibitory concentration

NOEL or NOEC: No Observed Effect Level or Concentration

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

· **Sources**

Data arise from safety data sheets, reference works and literature.

RTECS (Registry of Toxic Effects of Chemical Substances)

· * **Data compared to the previous version altered.**