



SAFETY DATA SHEET

Version 8.3
Revision Date 2025.07.18
Print Date 2026.01.20

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : Sodium Ascorbate, United States Pharmacopeia (USP) Reference Standard

Product Number : 1613509

Brand : US Pharmacopeia

1.2 Other means of identification

No data available

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

Identified uses : For R&D use only. Not for pharmaceutical, household or other uses.

1.4 Details of the supplier of the safety data sheet

Company :

MERCK LTD.
20F., No. 121, Jingmao 2nd Road, Nangang District, Taipei City
115, Taiwan

Merck KGaA
64271 Darmstadt
Germany
Phone: +49 6151 72-0

1.5 Emergency telephone number

Emergency Phone : +(44)-870-8200418 (CHEMTREC (GB))
Number : +(353)-19014670 (CHEMTREC Ireland)
001-803-017-9114 (CHEMTREC India)



2. HAZARDS IDENTIFICATION

GHS Classification

Short-term (acute) aquatic hazard : Category 3

GHS label elements

Hazard pictograms : None

Signal Word : None

Hazard Statements : H402 Harmful to aquatic life.

Precautionary statements : **Prevention:**
P273 Avoid release to the environment.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

May form explosible dust-air mixture if dispersed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Components

Hazardous ingredients	CAS-No.	Concentration (% w/w)
sodium ascorbate, L-	134-03-2	≥ 90 - ≤ 100

4. FIRST AID MEASURES

First aid measures for different exposure routes

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. Remove contact lenses.

If swallowed : After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

Most important symptoms and effects, both : The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in



acute and delayed	section 11
Protection of first-aiders	: For personal protection see section 8.
Notes to physician	: No data available

5. FIREFIGHTING MEASURES

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.
Specific hazards during fire fighting	: Combustible. Risk of dust explosion. Development of hazardous combustion gases or vapours possible in the event of fire.
Hazardous combustion products	: Carbon oxides Sodium oxides
Specific extinguishing methods	: Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.
Special protective equipment for fire-fighters	: In the event of fire, wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency proce-
---	---



dures, consult an expert.
Advice for emergency responders:
For personal protection see section 8.

Environmental precautions	: Do not let product enter drains.
Methods and materials 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.

7. HANDLING AND STORAGE

Handling

For precautions see section 2.2.

Advice on protection against fire and explosion	: Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.
---	--

Storage

Further information on storage conditions	: Tightly closed. Dry.
Storage class	: 11, Combustible Solids
Recommended storage temperature	: Recommended storage temperature see product label.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Biological occupational exposure limits

Contains no substances with biological exposure indices.

Engineering measures : No data available

Personal protective equipment

Respiratory protection : required when dusts are generated.

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.



Recommended Filter : Filter type P1
type:

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.

Hand protection

Material : Nitrile rubber
Break through time : 480 min
Glove thickness : 0.11 mm
Protective index : Full contact
Manufacturer : KCL 741 Dermatril® L

Material : Nitrile rubber
Break through time : 480 min
Glove thickness : 0.11 mm
Protective index : Splash contact
Manufacturer : KCL 741 Dermatril® L

Remarks : 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).

Eye protection : Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Safety glasses

Hygiene measures : Change contaminated clothing. Wash hands after working with substance.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : powder

Color : light yellow

Odor : odourless



Odor Threshold	: Not applicable
pH	: 7 - 8 (20 °C) Concentration: 100 g/l
Melting point	: ca. 232 °C Decomposition: yes Method: OECD Test Guideline 102 GLP: yes
Boiling point/boiling range	: No data available
Flash point	: No data available
Evaporation rate	: No data available
Flammability (solid, gas)	: May form combustible dust concentrations in air.
Flammability (liquids)	: No data available
Burning rate	: No data available
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Vapor pressure	: No data available
Relative vapour density	: No data available
Relative density	: 1.88 (19.7 °C) Method: OECD Test Guideline 109
Density	: 1.88 g/cm ³ (19.7 °C) Method: OECD Test Guideline 109 GLP: yes
Solubility(ies) Water solubility	: 642.6 g/l completely soluble (20 °C) Method: OECD Test Guideline 105
Partition coefficient: n- octanol/water	: log Pow: < -4.2 (22 °C) Method: OECD Test Guideline 107 GLP: yes Bioaccumulation is not expected.
Autoignition temperature	: 270 - 350 °C DIN 51794



Decomposition temperature	: 232 °C
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Flow time	: No data available
Explosive properties	: No data available
Oxidizing properties	: none
Surface tension	: 74 mN/m, 20.3 °C, OECD Test Guideline 115, GLP: yes
Molecular weight	: 198.11 g/mol
Particle characteristics	
Particle size	: No data available

10. STABILITY AND REACTIVITY

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.
Chemical stability	: The product is chemically stable under standard ambient conditions (room temperature) .
Possibility of hazardous reactions	: Violent reactions possible with: Oxidizing agents
Conditions to avoid	: no information available
Incompatible materials	: No data available
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 - 11,900 mg/kg

Remarks: (calculated on the free acid)
(RTECS)

Inhalation: No data available



Dermal: No data available

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

Remarks: (in analogy to similar products)

The value is given in analogy to the following substances: ascorbic acid

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation

(OECD Test Guideline 405)

Remarks: (in analogy to similar products)

The value is given in analogy to the following substances: ascorbic acid

Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: negative

(OECD Test Guideline 429)

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information

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

This substance is an essential part of the human diet.

Handle in accordance with good industrial hygiene and safety practice.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

sodium ascorbate, L-:

US Pharmacopeia- 1613509

The life science business of Merck operates as MilliporeSigma in the US and Canada

Page 8 of 13



Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): > 1,020 mg/l End point: mortality Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: yes
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 74 mg/l End point: Immobilization Exposure time: 48 h Test Type: semi-static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae/aquatic plants	: ErC50 (Pseudokirchneriella subcapitata): > 74 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201

Persistence and degradability

Components:

sodium ascorbate, L-:

Biodegradability	: aerobic Inoculum: activated sludge Concentration: 80 mg/l Result: Readily biodegradable. Biodegradation: > 99 % Exposure time: 28 d Method: OECD Test Guideline 301A GLP: yes
------------------	--

BOD/COD	: BOD/COD: > 70 % Remarks: (External MSDS)
---------	---

Bioaccumulative potential

Components:

sodium ascorbate, L-:

Bioaccumulation	: Remarks: No data available
Partition coefficient: n-octanol/water	: log Pow: < -4.2 (22 °C) Method: OECD Test Guideline 107 GLP: yes Remarks: Bioaccumulation is not expected.



Mobility in soil

Components:

sodium ascorbate, L-:

Stability in soil : Remarks: No data available

Other adverse effects

Components:

sodium ascorbate, L-:

Additional ecological information : No data available

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : 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.

The chemical must be disposed or recycled in accordance with Waste Disposal Act. See www.epa.gov.tw for the information of chemical waste disposal companies and their contacts.

14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No. : Not applicable
Proper shipping name : Not applicable
Class : Not applicable
Subsidiary risk : Not applicable
Packing group : Not applicable
Labels : Not applicable
Packing instruction (cargo aircraft) : Not applicable
Packing instruction (passenger aircraft) : Not applicable

IMDG-Code

UN number : Not applicable
Proper shipping name : Not applicable
Class : Not applicable
Subsidiary risk : Not applicable



Packing group	: Not applicable
Labels	: Not applicable
EmS Code	: Not applicable
Marine pollutant	: no

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

Not applicable for product as supplied.

Special precautions for user

Remarks	: Not classified as dangerous in the meaning of transport regulations.
---------	--

15. REGULATORY INFORMATION

National regulatory information

Occupational Safety and Health Act; Regulations on Occupational Safety and Health Facilities	: applicable
Waste Disposal Act; Standards for the Storage, Cleanup, Handling and Disposal of Industrial Waste	: applicable
Regulations on Labelling and Hazard Communication of Hazardous Chemicals; Exposure Assessment and Control Banding of Hazardous Chemicals	: Not classified as dangerous or harmful substances
Rules on Road Traffic Safety	: Not applicable
Standards of Permissible Exposure Limits in Workplace	: Contains no substances with occupational exposure limit values.
Rules on the Prevention of Poisoning from Organic Solvents.	: Not applicable
Standard for the Control of Designated Hazardous and Dangerous Chemicals	: Not applicable
Standards for Establishing Places for Manufacturing, Storing, Processing Public Hazardous Substances and Flammable Pressurized Gases, and Regulations on Safety Control of such Places	: Not applicable
Toxic and Concerned Chemical Substances Control Act	
Toxic chemical substances	: Not applicable
Concerned chemical substances	: Not applicable
Regulations for Governing Designating and Handling of Priority Management Chemicals	: applicable

16. OTHER INFORMATION

Further information

Literature references	: About detail information, please refer to each section The information contained herein is based on the pre-
-----------------------	---



sent state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.

Organization that prepared the SDS : Name:Merck KGaA LS-QH
Address/Telephone number:64271 Darmstadt Germany/+49 6151 72-0

Date that the SDS was prepared : 2025.07.18

Other information : The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.
Copyright 2020 Sigma-Aldrich Co. LLC. License granted to make unlimited paper copies for internal use only.

Date format : yyyy/mm/dd

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pol-



lution from Ships; MERCOSUR - The Agreement for the Facilitation of the Transport of Dangerous Goods; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact mlsbranding@sial.com.

TW / EN

