



Safety Data Sheet

Ascorbic Acid SDS

Effective date: May 28 2014

Section 1 Product and Company Identification

Product name: Ascorbic Acid, Vitamin C

Company information:

Name: CSPC Weisheng Pharmaceutical (Shijiazhuang) Co., Ltd.

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Section 2 Hazards Identification

Classification: Not applicable.

Label element: Not applicable.

Hazard description: No particular hazards known.

Potential acute health effects: Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Section 3 Composition/Information on Ingredients

Characterization: Water soluble vitamin; pharmaceuticals, food and feed additive.

Synonyms: Vitamin C; L-Ascorbic acid; (5R)-5-[(1S)-1,2-dihydroxyethyl]-3,4-dihydroxyfuran-2(5H)-one

CAS number: 50-81-7

EINECS number: 200-066-2

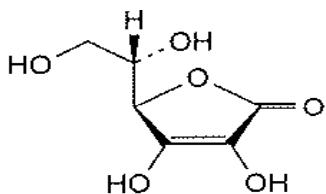


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Chemical formula: C₆H₈O₆

Molecular mass: 176.13 g/mol

Structure formula:



Section 4 First-aid Measures

Eye contact: Rinse immediately with tap water for 10 minutes - open eyelids forcibly.

Skin contact: Remove contaminated clothes; wash affected skin with water and soap; do not use any solvents.

Inhalation: Remove the casualty to fresh air and keep him/her calm; in the event of symptoms get medical treatment.

Note to physician: Treat symptomatically.

Section 5 Fire-fighting Measures

Suitable extinguishing media: Water spray jet, dry powder, foam, carbon dioxide.

Specific hazards: Severe dust explosion hazard.

Protection of fire-fighters: Precipitate gases/vapors/mists with water spray.

Section 6 Accidental Release Measures

Methods for cleaning up: Collect solids (avoid dust formation) and hand over to waste removal; rinse with plenty of water.

Section 7 Handling and Storage

Handling

Technical measures: Processing in closed systems, if possible superposed by inert gas (e.g. nitrogen); local exhaust ventilation necessary; take precautionary measures against electrostatic charging; avoid dust formation; high dust explosion hazard.



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Suitable materials: Stainless steel, coated steel (protective lacquer), glass, polyethylene, polypropylene, enamel and not easy to corrosion material by acid and alkali.

Unsuitable materials: Aluminum, copper, zinc, iron and so on.

Storage

Storage conditions: Store in a non-metallic and sealed container, keep in a dry place and away from light.

Packaging materials: Tightly closing; material: coated steel (protective lacquer), glass, polyethylene, polypropylene, PVC and so on.

Section 8 Exposure Controls/Personal Protection

Engineering measures: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

Monitoring

Threshold value air: IOEL--10 mg/m³ (defined as 8-hour time-weighted average)

Analytics: Sampling on glass fibre filter and gravimetric or chemical determination.

Personal protective

Respiratory protection: In case of high dust concentrations: particle mask or respirator with independent air supply.

Hand protection: Protective gloves (e.g. made of natural rubber).

Eye protection: Safety glasses.

Section 9 Physical and Chemical Properties

Color: White to almost white.

Form: Crystalline powder or colorless crystals.

Odor: Almost odorless, with sharp acidic, pleasant taste.

Sieve analysis: Retained on 40 meshes NMT 20%, between 40-80 meshes NLT 50%.

Solubility: Free soluble in water; soluble in ethanol (96 percent); virtually insoluble in ethyl ether; virtually insoluble in chloroform.

PH value: 2.1-2.6 (5 % aqueous solution).



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Dissociation constant: $pK_1 = 4.17$; $pK_2 = 11.57$ (water).

Melting temperature: About 190°C (with decomposition).

Section 10 Stability and Reactivity

Stability: Stable at room temperature under exclusion of humidity.

Conditions to avoid: Humidity; warming.

Materials to avoid: Oxidizing agents, atmospheric oxygen, bases, metals, metal salts.

Note: On prolonged storage, a yellow discoloration may occur; through slow decomposition, which does not noticeably diminish biological activity; In aqueous solutions ascorbic acid is very susceptible to oxidative decomposition, particularly in the presence of alkali resp. heavy metal ions.

Section 11 Toxicological Information

Acute toxicity: LD50 11'900 mg/kg (oral, rat)

LD50 8'000 mg/kg (oral, mouse)

Local effects:

Eye: may cause irritations

Mucous membranes: may cause irritations

Skin: may cause irritations; particularly in conjunction with humidity (perspiration)

Chronic toxicity: In predisposed individuals 4-12 g/d may cause urinary calculus

Mutagenicity: No suspicion of human mutagenicity

Carcinogenicity: Not carcinogenic (several species)

Reproduction toxicity: Not teratogenic, not embryo toxic

Note: Oral uptake of up to 9 g per day does not produce any serious toxic effects, however, even lesser quantities may cause diarrhoea; RDA (recommended daily allowance): 60 mg.

Section 12 Ecological Information

Inherent biodegradability: Well inherently biodegradable;

97 %, 5 d; 100 %, 15 d



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Ecotoxicity: Barely toxic for fish (rainbow trout) LC50 (96 h) 1020 mg/l; the inhibitory concentration relates to re-attachment to substrate (Dreissena polymorpha) MIC (48 h) > 50 mg/l (nominal concentration).

Air pollution: Observe local/national regulations.

Section 13 Disposal Considerations

Waste from residues: Observe local/national regulations regarding waste disposal; drain very small quantities into wastewater treatment plant; large amounts: incinerate in qualified installation.

Section 14 Transport Information

Note: Not classified by transport regulations

Section 15 Regulatory Information

Note: No classification and labeling according to EU directives; this product is on the European Inventory of Existing Commercial Chemical Substances.

Section 16 Other Information

Use: Additive for use in food and pharmaceuticals; feed additive.

Biological activity: 1 I.U. (international unit) of vitamin C corresponds to the activity of 50 µg of pure ascorbic acid.

Reference literature: ISO11014-1; General rules for preparation of chemical safety data sheet (CSDS); CLP Regulation (EC).

The information in this safety data sheet is based on current scientific knowledge. It should not be taken as expressing or implying any warranty concerning product characteristics.