

Product Information

Product Data Sheet

Ascorbic Acid

Product code: 0408050

Description

Ascorbic Acid is a powder with a strong acid taste. It melts at about 190 °C with decomposition.

Product identification

Product code: 04 0805 0

Chemical names: L-*threo*-hex-2-enoic acid γ -lactone; 3-oxo-L-gulofuranolactone (enol form)

Synonyms: L-ascorbic acid; L-*xyl*o-ascorbic acid; L-(+)-ascorbic acid; vitamin C

CAS No.: 50-81-7

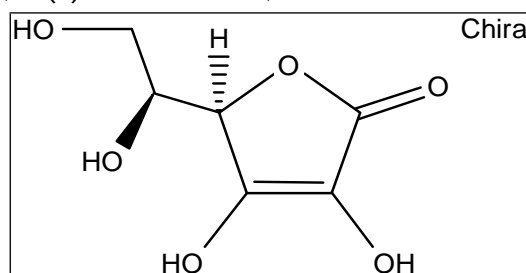
EINECS No.: 200-066-2

E No.: E 300

INCI name: ascorbic acid

Empirical formula: C₆H₈O₆

Molecular mass: 176.13 g/mol



Specifications

Appearance:	powder
Colour:	white to slightly yellow
Fineness (US standard sieves):	
• through sieve No. 20	100 %
• through sieve No. 100	max. 70 %
• through sieve No. 200	max. 20 %
Solution 5 % in water:	clear and colourless
pH (c = 5 in water):	2.2 - 2.5
Identity:	corresponds
Specific rotation: (589 nm, 20°C, c = 10 in water)	+20.5° to +21.5°
Loss on drying:	max. 0.1 %

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Related substances:

• L-sorbosonic acid (impurity C)	max. 0.15 %
• Methyl L-sorbosonate (impurity D)	max. 0.15 %
• Unspecified impurities (each)	max. 0.10 %
• Total (other than C and D) *	max.0.2 %
*Disregard limit	0.05 %
Sulphated ash (residue on ignition):	max. 0.1 %
Heavy metals:	max. 10 ppm
Lead:	max. 2 ppm
Mercury:	max. 1 ppm
Zinc:	max. 25 ppm
Copper:	max. 5 ppm
Iron:	max. 2 ppm
Arsenic:	max. 3 ppm
Oxalic acid (impurity E):	max. 0.2 %
Residual solvents	
• Ethanol	max. 120 mg/kg
• Methanol	max. 60 mg/kg
Assay:	99.0 – 100.5 %

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Solubility

Ascorbic Acid is freely soluble in water (approx. 30 g per 100 mL), sparingly soluble in alcohol (approx. 2 g per 100 mL) and practically insoluble in ether, petroleum ether, chloroform, oils and fats.

Stability and storage

Ascorbic Acid is fairly stable to air if protected from humidity, but is somewhat sensitive to heat. The product may be stored for 36 months from the date of manufacture in the unopened original container and at a temperature below 25 °C. The 'best use before' date is printed on the label. On prolonged storage, a slight yellow discoloration may occur which, however, does not affect the biological activity. In aqueous solutions, ascorbic acid is decomposed by oxygen and by other oxidizing agents, particularly in the presence of alkali and of ions of metals such as copper and iron.

Uses

For the enrichment of liquid feed preparations. For feedstuffs, use ROVIMIX® forms.

For the enrichment, standardization or stabilization of dry food preparations and drinks; for the improvement of the baking qualities of flour; as an agent in dry mixes for curing meat.

For solid and liquid multivitamin and monovitamin preparations.

Compendial compliance

Ascorbic Acid meets all requirements of the current version of the USP, FCC and Ph. Eur. when tested according to these compendia.

Safety

This product is safe for the intended use. Avoid ingestion, inhalation of dust or direct contact by applying suitable protective measures and personal hygiene.

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Additional information

To find out more about our ingredients, please contact your nearest DSM Nutritional Products office.

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