

# Product Information

## Product Data Sheet

# Ascorbic Acid Ultra Fine Powder

## Description

Ascorbic Acid Ultra Fine Powder is a practically odourless, white to slightly yellow powder with a strong acid taste. It melts at about 190 °C with decomposition.

## Product identification

Product code: 50 0976 6

Chemical names: L-threo-hex-2-enoic acid  $\gamma$ -lactone; 3-oxo-L-gulofuranolactone (enol form)

Synonyms: L-ascorbic acid; L-xylo-ascorbic acid; L-(+)-ascorbic acid; vitamin C

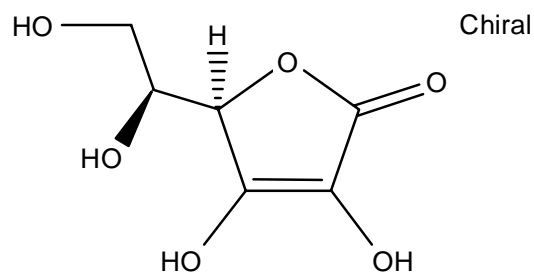
CAS No.: 50-81-7

EINECS No.: 200-066-2

E No.: E 300

Empirical formula:  $C_6H_8O_6$

Molecular mass: 176.13 g/mol



## Specifications

Appearance:	powder
Colour:	white to slightly yellow
Fineness (US standard sieves):	
• through sieve No. 100	100 %
• through sieve No. 200	min. 95%
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%
Related substances:	
• D-sorbosonic acid (impurity C)	max. 0.15%
• Methyl D-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%

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Sulphated ash (residue on ignition):	max. 0.1%
Heavy metals:	max. 10 ppm
Lead:	max. 2 ppm
Zinc:	max. 25 ppm
Copper:	max. 5 ppm
Iron:	max. 2 ppm
Mercury:	max. 1 ppm
Arsenic:	max. 3 ppm
Oxalic acid (impurity E):	max. 0.2%
Residual solvents	
• Ethanol	max. 1000 mg/kg
• Methanol	max. 3000 mg/kg
Assay:	99.0-100.5%

## Solubility

Ascorbic Acid Ultra Fine Powder 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 Ultra Fine Powder 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.

For solid and liquid pharmaceutical preparations.

This product is not intended for use in the manufacture of sterile drug products. The purchaser assumes all responsibility for additional processing, testing, labelling and registration required for such use.

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## 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.

For full safety information and necessary precautions, please refer to the respective DSM Material Safety Data Sheet.

## Legal notice

The information given in this publication is based on our current knowledge and experience, and may be used at your discretion and risk. It does not relieve you from carrying out your own precautions and tests. We do not assume any liability in connection with your product or its use. You must comply with all applicable laws and regulations, and observe all third party rights.

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