

MATERIAL SAFETY DATA SHEET

SECTION 1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

Product Name: Ascorbic Acid
Company: Ningxia Qiyuan Pharmaceutical Co., Ltd.
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SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

MSDS Name: Ascorbic acid
Synonym: Vitamin C, L-Ascorbic acid
Chemical Name: (5R)-5-[(1S)-1,2-dihydroxyethyl]-3,4-dihydrofuran-2 (5H)-one
CAS No.: 50-81-7
Content: 100% (Ascorbic acid)
Hazard Symbols: None Listed.
Risk Phrases: None Listed.

SECTION 3. HAZARDS IDENTIFICATION

Invasive Pathway: Inhalation, ingestion and skin
Health Hazards: No information found.
Environment Hazards: No information found.
Explosive Hazards: Flammable.

SECTION 4. FIRST AID MEASURES

Eyes: Immediately lift the upper and lower eyelids eyelid up, flush eyes with plenty of running water. Get medical aid.
Skin: Flush skin with plenty of water while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.
Ingestion: If large amounts are swallowed, get medical aid immediately.
Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen.

SECTION 5. FIRE FIGHTNG MEASURES

General Information: Flammable. Fire is possible at elevated temperatures or by contact with an ignition source.
Extinguisher: Dry powder, foam and water spray.
Extinguishing Note: Don't stay in a danger area unless the chemical safeguard and oxygen supply equipment are prepared, avoiding the chemicals into the surface water and ground water.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Protection: Don't inhale the steam. Use proper personal protective equipment as indicated in **SECTION 8**.

Environmental Protection: The chemicals are not allowed to charge into the drainage system without disposal.

Cleaning: Collect and reclaim the leaking-materials with secure method or transport to a disposal site to further dispose. Then clean the contaminated area.

SECTION 7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Use adequate ventilation.

Storage: Keep in a tightly closed container, store in a cool, dry, ventilated place. Store protected from light and incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Use adequate ventilation to keep airborne concentrations low. Immediately change the contaminated clothing. Daub the skin with cream. Wash the face and hands after work. Don't inhale its steam.

Exposure Limits: No information found.

Personal Protective Equipment:

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Wear appropriate protective dustproof respirator to prevent inhalation.

Others: No smoking at the work site. Pay attention to personal sanitation. Avoid contacting repeatedly and constantly.

SECTION 9. PHYSICAL AND CHEMICALS PROPERTIES

Physical State: Solid

Color: White or almost white

Odor: Odorless

pH: 2.2~2.5 (50 g/L H₂O, 20°C)

Melting Point: 190~192°C (with decomposition)

Boiling Point: Not available

Flash Point: Not available

Ignition Temperature: 380°C

Explosion Limits (lower): Not available.

Explosion Limits (upper):	Not available.
Solubility:	Freely soluble in water (330g/L, 24°C), soluble in ethanol (96%) (20g/L, 20°C)
Density:	1.65 g/cm ³
Apparent Density:	500~900 kg/m ³
Molecular Formula:	C ₆ H ₈ O ₆
Molecular Weight:	176.1
Specific Optical Rotation:	+20.5° ~ +21.5°
Other Properties:	Becoming discolored on exposure to air and moisture.

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under ordinary conditions of use and storage. Aqueous solutions are rapidly oxidized by air.
Conditions to Avoid:	Heat and light.
Incompatibilities with Other Materials:	Metals, especially the copper, iron, aluminum and zinc. Oxidant, becoming discolored on exposed to air and moisture.
Hazardous Decomposition Products:	May produce acrid smoke and irritating fumes when heated to decomposition.
Hazardous Polymerization:	Will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

Emergency Toxicity:	Oral: LD50: 11900 mg/kg (Rat). Investigated as a tumorigen, mutagen, and reproductive effector.
Skin Irritative Test	No irritating (Rabbit).
Eye Irritative Test	Slightly irritating (Rabbit).
Other:	Be careful when dispose the product.

SECTION 12. ECOLOGICAL INFORMATION

Ecological Toxicity:	Fish: Onchorhynchus mykiss LC50: 1020mg/L/96 h acid; L.idus LC50: 33000 mg/L/48 h.
Biological Degradation:	Degradation, will not affect the disposal of waste water if in a suitable disposal.
Biological Enrichment or Accumulation:	Not occur.

SECTION 13. DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

SECTION 14. TRANSPORT INFORMATION

Not regulated.

SECTION 15. REGULATORY INFORMATION

Not available.

SECTION 16. OTHER INFORMATION

Label Hazard Warning: As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes and clothing.

Label First Aid: Not applicable.

Product Use: Laboratory Reagent.

The above information is believed to be correct but does not support to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. It does not represent any guarantee of the properties of the product. Ningxia Qiyuan Pharm. shall not be held liable for any damage resulting from handling or from contact with the above product.

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