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Item #0395-0123

ASCORBIC ACID, USP

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SECTION I

PRODUCT IDENTIFICATION

PRODUCT NAME: Ascorbic Acid USP

SECTION II

COMPOSITION, INFORMATION ON INGREDIENTS

CHEMICAL NAME: 3-oxo-1-gulonic acid-γ-lactone

COMMON SYNONYMS: (L+) Ascorbic Acid, Vitamin C

CHEMICAL CHARACTERIZATION: C₆H₈O₅

CHEMICAL FAMILY: Vitamin C

EINECS No.: 200-066-2

CAS NO.: 50-81-7

HAZARDOUS IMPURITIES: None

PRECAUTIONARY LABELING

Degree of Hazard

4 - Extreme	Flammability	1
3 - High	Health	2
2 - Moderate	Reactivity	0
1 - Slight	Special Hazard	0
0 - Insignificant		

SECTION III

HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

Appearance & Odor: Fine white to yellowish crystalline powder with slight acidic odor.

Most Important Hazard: Irritating to eyes, dust explosion hazard.

POTENTIAL HEALTH EFFECTS

Routes of Exposure: Inhalation, ingestion, skin contact, eye contact.

Target Organs: Respiratory system, gastrointestinal system, renal system.

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ACUTE EFFECTS:

General: May cause mucous membrane irritation (inflammation). May cause gastrointestinal effects such as nausea, vomiting, diarrhea, constipation, cramps, and loss of appetite.

Skin: May cause skin irritation.

Eye: May cause eye irritation.

CHRONIC EFFECTS

General: May increase blood calcium levels. May cause kidney stones. May cause bladder stones.

Carcinogenicity: Not listed by NTP, IARC, or OSHA.

Conditions Aggravated: Hemochromatosis, thalassemia, sideroblastic or sickle cell anemia.

SECTION IV

FIRST AID MEASURES

Inhalation: Remove to fresh air. Get medical attention. If not breathing, give artificial respiration. If breathing is difficult, administer oxygen by qualified personnel.

Skin Contact: Remove contaminated clothing and shoes. Wash skin with soap and plenty of water. If irritation occurs or persists, get medical attention. Wash clothing and shoes before reuse.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes while lifting lids. If irritation occurs or persists, get medical attention.

Ingestion: If conscious give two glasses of water or milk, induce vomiting. Get medical attention. Never give anything by mouth to an unconscious person.

SECTION V

FIRE FIGHTING MEASURES

Flash Point: NA **Flammable Limits:** Unknown **Auto Ignition Temperature:** 370-375°C

General Hazards: Material is combustible. High concentrations of dust in air may form explosive mixture.

Extinguishing Media: Water, Carbon Dioxide, Dry Chemical, and foam.

Hazardous Decomposition Products: Carbon oxides

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Special Protective Equipment: Use personal protective equipment including self-contained breathing apparatus when fighting fire in enclosed area.

Specific Methods: Standard procedure for chemical fires.

SECTION VI ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protective equipment. Avoid dust formation.

Environmental precautions: Dispose according to federal, state and local authorities.

Methods for Cleaning Up: Sweep up and shovel. After cleaning, flush away traces with water.

SECTION VII HANDLING AND STORAGE

HANDLING

Technical Measures/Precautions: Take precautionary measures against static discharges. Avoid dust formation.

Safe handling advice: Use personal protective equipment.

STORAGE

Technical Measures/Storage Conditions: Protect from light. Keep tightly closed in a dry and cool place.

Incompatible Products: Incompatible with strong bases and oxidizing agents.

Packaging Material: Store in original container.

SECTION VIII EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures: Provide general dilute ventilation.

Exposure Limit(s): (ACGIH, OSHA, NIOSH) None established.

Respiratory Protection: NIOSH approved dust respirator.

Hand Protection: gloves

Eye Protection: Safety Glasses

Skin & Body Protection: Lightweight protective clothing.

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Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice.

SECTION IX PHYSICAL AND CHEMICAL PROPERTIES

Form: Powder. **Color:** colorless/white/slightly yellow.

Odor: None to slightly acidic. **pH:** 2.2 – 2.5 @ 10% aqueous solution.

Vapor Pressure: Unknown **Vapor Density:** Unknown

Boiling Point: NA **Evaporation Rate:** Unknown

Melting Point/Range: 190°C **Decomposition Temperature:** 190°C

Relative Density: 1.65 g/cm³ **Bulk Density:** 700 – 800 kg/m³

Explosive Properties: Unknown **Water Solubility:** g/kg 242 @ 20°C

Coefficient of water/oil distribution: Unknown

SECTION X STABILITY AND REACTIVITY

Stability: stable

Materials to Avoid: Incompatible with strong bases & oxidizing agents.

Hazardous Polymerization: Does not occur.

SECTION XI TOXICOLOGICAL INFORMATION

Acute Toxicity: LD50/oral/rat = >10,000 mg/kg **Local Effects:** No data available.

Chronic Toxicity: No data available.

Human Experience: May cause sensitization of susceptible persons by skin contact.

SECTION XII ECOLOGICAL INFORMATION

Mobility: Completely soluble

Persistence & degradability

Chemical Oxygen Demand: 70% of BOD

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Readily biodegradable

Ecotoxicity Effects: Toxicity to fish EC/LC0 = 1000 mg/l
Toxicity to bacterial EC/LC10 = 90 mg/l

SECTION XIII DISPOSAL CONSIDERATIONS

Waste from Residues/Unused Products: Any disposal practice must be in compliance with local, state and federal laws and regulations (contact local or state environmental agency for specific rules).

SECTION XIV TRANSPORTATION INFORMATION

Not regulated by DOT.

SECTION XV REGULATORY INFORMATION

Ascorbic acid is generally regarded as safe (GRAS) by USA FDA, 21 CFR 182.3013; 29 CFR 182.5013

Carcinogen Status (components present at 0.1% or more): None

Listed European Food Additive E330
The material is listed on the TSCA Inventory List

CERCLA (Comprehensive Response Compensation, and Liability Act): Not hazardous

SARA Title III (Superfund Amendments & Reauthorization Bill): Not hazardous

Foreign Inventory Status

Canadian DSL (Domestic Substance List)