



## Material Safety Data Sheet

L-Ascorbic acid

MSDS# 12385

### Section 1 - Chemical Product and Company Identification

MSDS Name: L-Ascorbic acid

Catalog A61-100, A61-100LC, A61-25, A61-25LC, A62-12, A62-212, A62-25, A62-500, BP351-500,

Numbers: EK1173087, EK1173095

Synonyms: Ascorbic acid; 3-Keto-L-glucofuranolactone; Vitamin C; L-3-keto-threo-hexuronic acid lactone.

Company Identification:

Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410

For information in the US, call:

201-796-7100

Emergency Number US:

201-796-7100

CHEMTREC Phone Number, US:

800-424-9300

### Section 2 - Composition, Information on Ingredients

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CAS#: 50-81-7  
Chemical Name: L-Ascorbic acid  
%: 99  
EINECS#: 200-066-2  
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Hazard Symbols: None listed

Risk Phrases: None listed

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Warning! Light sensitive. Air sensitive. Strong reducing agent. Fire and explosion risk in contact with oxidizing agents. May cause eye, skin, and respiratory tract irritation. Target Organs: None.

#### Potential Health Effects

Eye: May cause eye irritation.

Skin: May cause skin irritation. Low hazard for usual industrial handling.

Ingestion: Ingestion of large amounts may cause gastrointestinal irritation. Low hazard for usual industrial handling. Large doses may cause diarrhea and acidification of the urine which may cause stones in the urinary tract.

Inhalation: May cause respiratory tract irritation. Low hazard for usual industrial handling.

Chronic: No information found.

### Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation develops, get medical aid.

Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

Ingestion: Never give anything by mouth to an unconscious person. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Wash mouth out with water. Get medical aid if irritation or symptoms occur.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Notes to Physician:

### Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion. Powerful reducing agent.

Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire.

Autoignition Temperature: 660 deg C ( 1,220.00 deg F)

Flash Point: Not available

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: health: 1; flammability: 1; instability: 1;

#### Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation.

#### Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Use with adequate ventilation. Avoid breathing dust.

Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture. Store protected from light. Store under an inert atmosphere.

#### Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
L-Ascorbic acid	none listed	none listed	none listed

OSHA Vacated PELs: L-Ascorbic acid: None listed

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to minimize contact with skin.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

#### Section 9 - Physical and Chemical Properties

Physical State: Crystals

Color: white to yellow

Odor: none reported

pH: 2.1-2.6 (5% soln)

Vapor Pressure: Not available

Vapor Density: Not available

Evaporation Rate: Not available

Viscosity: Not available

Boiling Point: Not available

Freezing/Melting Point: 190 deg C ( 374.00°F)

Decomposition Temperature:

Solubility in water: Soluble

Specific Gravity/Density: 1.65

Molecular Formula: C<sub>6</sub>H<sub>8</sub>O<sub>6</sub>

Molecular Weight: 176.13

Section 10 - Stability and Reactivity

Chemical Stability: Stable to air when dry; aqueous solutions are rapidly oxidized by air.

Conditions to Avoid: Light, dust generation, excess heat, moist air.

Incompatibilities with Other Materials: Strong oxidizing agents, aluminum, copper, copper alloys, zinc.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 50-81-7: CI7650000

RTECS:

**CAS# 50-81-7:** Oral, mouse: LD<sub>50</sub> = 3367 mg/kg;

LD<sub>50</sub>/LC<sub>50</sub>: Oral, rat: LD<sub>50</sub> = 11900 mg/kg;

Other: Coenzyme for a number of hydroxylation reactions; required for collagen synthesis. Inadequate intake results in deficiency syndromes such as scurvy.

Carcinogenicity: L-Ascorbic acid - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: Not regulated as a hazardous material

Hazard Class:

UN Number:

Packing Group:

Canada TDG

Shipping Name: Not available

Hazard Class:

UN Number:

Packing Group:

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Not available

Risk Phrases:

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS# 50-81-7: 0

Canada

CAS# 50-81-7 is listed on Canada's DSL List

Canadian WHMIS Classifications: Not controlled.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 50-81-7 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 50-81-7 is listed on the TSCA

Inventory.

Section 16 - Other Information

MSDS Creation Date: 7/13/1999

Revision #9 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

**REVIEWED**

DATE: 30 March 2012

*Butterfield*