

Material Safety Data Sheet

L-Ascorbic acid

ACC# 12385

Section 1 - Chemical Product and Company Identification

MSDS Name: L-Ascorbic acid

Catalog Numbers: S71917, S71918, S93131, A61-100, A61-100LC, A61-25, A61-25LC, A62-12, A62-212, A62-25, A62-500, AA245-C, BP351-500, NC9557991, XXA61-7KG

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

Company Identification:

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
50-81-7	L-Ascorbic acid	99	200-066-2

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: white to yellow crystals.

Caution! Strong reducing agent. Fire and explosion risk in contact with oxidizing agents. May cause eye, skin, and respiratory tract irritation. Light sensitive. Air sensitive.

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: Treat symptomatically and supportively.

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.

Flash Point: Not available.

Autoignition Temperature: 1220 deg F (660.00 deg C)

Explosion Limits, Lower:Not available.

Upper: Not available.

NFPA Rating: (estimated) 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

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

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

OSHA Vacated PELs: L-Ascorbic acid: No OSHA Vacated PELs are listed for this chemical.

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: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Crystals

Appearance: 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

Decomposition Temperature: 190 deg C

Solubility: Soluble.

Specific Gravity/Density: 1.65

Molecular Formula: C₆H₈O₆

Molecular Weight: 176.13

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions. 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.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:

CAS# 50-81-7: CI7650000

LD50/LC50:

CAS# 50-81-7:

Oral, mouse: LD50 = 3367 mg/kg;

Oral, rat: LD50 = 11900 mg/kg;

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

Carcinogenicity:

CAS# 50-81-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.

Teratogenicity: No information found

Reproductive Effects: No information available.

Mutagenicity: No information available.
Neurotoxicity: No information available.
Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	Not regulated as a hazardous material	No information available.
Hazard Class:		
UN Number:		
Packing Group:		

Section 15 - Regulatory Information

US FEDERAL

TSCA

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

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depleters.
This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 50-81-7 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

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 - DSL/NDSL

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

Canada - WHMIS

This product has a WHMIS classification of 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.

Section 16 - Additional Information

MSDS Creation Date: 7/13/1999

Revision #6 Date: 6/19/2006

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 Fisher 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 Fisher has been advised of the possibility of such damages.