MSDS (Material Safety Data Sheet)

Ascorbic Acid

1. Product Identification

Synonyms: L-ascorbic acid; vitamin C; L-3-Ketothreohexuronic acid lactone
CAS no.: 50-81-7
Molecular Weight: 176.13
Chemical Formula: C6H8O6
Product Codes: J.T. Baker; 0936, 0937, 0938, B581 Mallinocrodt: 1852, 4407, 8829

2. Composition/Information on Ingredients

Ingredient	CAS no.	Percent	Hazardous
L-Ascorbic Acid	50-81-7	100%	Yes

3. Hazards Identification

Emergency Overview

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.

J.T Baker SAF-T-DATA™ Ratings (Provided here for your convenience)

Health Rating: 1-slight
Flammability Rating: 1-slight
Reactivity Rating: 0-none
Contact Rating: 1-slight

Lab Protective Equipment: GOGGLES, LAB COAT
Storage Color Code: Orange (General Storage)

Potential Health Effects

Ascorbic acid is relatively non-hazardous in routine industrial situations. It is not expected to present significant health risks to the workers who use it.

Inhalation: May cause mild irritation to the respiratory tract

Ingestion: Large oral does may cause gastrointestinal disturbances

Skin Contact: May cause mild irritation

Eye Contact: May cause mild irritation

Chronic Exposure: No information found

Aggravation of Pre-existing Conditions: No information found

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4. First Aid Measures

see Health Hazards General.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if irritation persists.

Ingestion: Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.

Skin Contact: Wash exposed area with water and soap. Get medical advice if irritation develops.

Eye Contact: Wash thoroughly with running water. Get medical advice if irritation develops.

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5. Fire Fighting Measures

Fire: As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.

Explosion: Not considered to be an explosion hazard.

Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8.

Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust.

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7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from any source of heat or ignition. Isolate from 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.

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8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

OSHA Permissible Exposure Limit (PEL): 15 mg/m3 total dusts.

ACGIH Threshold Limit Value (TLV): 10 mg/m3 total dust containing no asbestos and <1% crystalline silica for Particulates Not Otherwise Classified (PNOC)

Ventilation System:

In general, dilution ventilation is a satisfactory health hazard control for this substance. However, if conditions of use create discomfort to the worker, a local exhaust system should be considered.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded, a half-face dust/mist respirator may be worn for up to ten time the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece dust/mist respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive pressure, air-supplied respirator.
WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

9. Physical and Chemical Properties

Appearance: White Crystals

Odor: Odorless

Solubility: 33g/100g water

Density: 1.65

pH: 3 for 5mg/L aqueous solution; 2 for 50mg/L aqueous solution

% Volatiles by volume @ 21°C (70°F): 0

Boiling Point: Not Applicable

Melting Point: 192°C (378°F) slightly decomposes

Vapor Density: No information found

Vapor Pressure: No information found

Evaporation Rate: No information found

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10. Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage. Aqueous solutions are rapidly oxidized by air.

Hazardous Decomposition Products: May produce acrid smoke and irritating fumes when heated to decomposition.

Hazardous Polymerization: Will not occur

Incompatibilities: Strong oxidizers and alkali hydroxides, alkalis, iron, copper, sodium salicylate, sodium nitrate, theobromine and methenamine.

Conditions to avoid: No information found

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11. Toxicological Information

Oral LD50 11,900 Investigated as a tumorigen, mutagen, and reproductive effector.

------Cancer Lists----------

----------NTP Carcinogen----------			
Ingredient	Known	Anticipated	IARC Category
L-Ascorbic Acid	No	No	None

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12. Ecological Information

Environmental Fate: No information found

Environmental Toxicity: No information found

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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.

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14. Transport Information

NOT REGULATED

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15. Regulatory Information

-------Chemical Inventory Status – Part 1----------				
Ingredient	TSCA	EC	Japan	Australia
L-Ascorbic Acid	Yes	Yes	Yes	Yes

-------Chemical Inventory Status – Part 2----------				
Ingredient	Korea	DSL	NDSL	Phil.
L-Ascorbic Acid	Yes	Yes	No	Yes

--------Federal, State, and International Regulations – Part 1----------				
	----------SARA 302----------		----------SARA 313----------	
Ingredient	RQ	TPQ	List	Chemical Catg.
L-Ascorbic Acid	No	No	No	No

--------Federal, State, and International Regulations – Part 2----------			
	CERCLA	RCRA	TSCA
Ingredient		261.33	8(d)
L-Ascorbic Acid	NO	No	No

Chemical Weapons Convention: NO TSCA 12(b): NO CDTA: NO

SARA 311/312: Acute: NO Chronic: NO Fire: NO Pressure: NO

Reactivity: NO (pure/solid)

Australian Hazchem Code: No information found
Poison Schedule: No information found

WHMIS: This MSDS has been prepared according to the hazards criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

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16. Other Information

NFPA Ratings: Health:1 Flammability:0 Reactivity:0

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 Precautions: None

Label First Aid: Not applicable

Label Use: Laboratory Reagent

Revision Information: Pure. New 16 section MSDS format, all sections have been revised.