

**MATERIAL SAFETY DATA SHEET**

Page 1 of 4

Review Date: 8/27/2001

JUNGBUNZLAUER INC.  
Product: Ascorbic Acid**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

COMMERCIAL PRODUCT NAME	Ascorbic Acid
COMPANY/SUPPLIER	Jungbunzlauer Inc. 7 Wells Avenue Newton Centre, MA 02459 1- 617-969-0900; 8:30 - 5:00 M-F Eastern Time
Emergency Phone	CHEMTREC 1-800-424-9300
24 Hour Emergency Phone Number	
PRODUCT USE	Vitamin, antioxidant

**2. COMPOSITION, INFORMATION ON INGREDIENTS**

Chemical Name Of The Material	3-Oxo-1-Gulonic acid-γ-lactone
Chemical Formula	C <sub>6</sub> H <sub>8</sub> O <sub>6</sub>
Chemical Family	Organic Acid
Synonyms	(L+) Ascorbic Acid, Vitamin C
CAS Reg. No.	50-81-7
EINECS-Nr.	200-066-2
Hazardous Impurities	None

**3. HAZARDS IDENTIFICATION**

Emergency Overview	Fine white to yellowish crystalline powder with slight acidic odor.
Most important Hazard	Irritating to eyes, Dust explosion hazard
Potential Health Effects	
Relevant Routes of exposure	Inhalation, Ingestion, Skin Contact, Eye Contact
Target Organs	Respiratory system, Gastrointestinal System, Renal System
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 or bladder stones.
Carcinogenicity	Not listed by NTP, IARC or OSHA
Conditions aggravated	Hemachromatosis, thalassemia, sideroblastic or sickle cell anemia.

**4. FIRST AID MEASURES**

Inhalation:	Remove To Fresh Air. If Breathing Is Difficult Give Oxygen. If Not Breathing Give Artificial Respiration. Get Medical Attention.
Eye Contact:	Immediately Flush With Plenty Of Water For At Least 15 Minutes While Occasionally Lifting Lids. If Irritation Develops And Persists Get Medical Attention.
Skin Contact:	Remove Contaminated Shoes And Clothing. Wash Thoroughly With Mild Detergent Or Soap And Plenty Of Water. If Irritation Develops And Persists Get Medical Attention. Wash Clothing Before Reuse.
Ingestion:	If Conscious Give Two Glasses Of Water Or Milk. Induce Vomiting. Get Medical Attention. Never Give Anything By Mouth To An Unconscious Person.
Protection of first-aiders	Use personal protective equipment.

## MATERIAL SAFETY DATA SHEET

Page 1 of 4

Review Date: 8/27/2001

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### 5. FIRE FIGHTING MEASURES

**FLASH POINT**

Not applicable

**FLAMMABLE LIMITS**

Unknown

**Autoignition temperature**

370-375 °C

**General Hazards**

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

**Suitable extinguishing media**

Water, water spray, dry powder, foam, carbon dioxide (CO2)

**Extinguishing media which must not be used for safety reasons**

None

**Hazardous decomposition products**

Carbon oxides

**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.

### 6. 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.

### 7. 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.

### 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

**Engineering measures**

Provide general dilute ventilation.

**Exposure limit(s)**

(ACGIH, OSHA, NIOSH) None established  
 use OSHA PEL, ACGIH TLV for Nuisance dusts of 5 mg/ m3.

**Personal protection equipment**

**Respiratory protection**

NIOSH approved dust respirator

**Hand protection**

Gloves

**Eye Protection**

Safety glasses

**Skin and body protection**

Lightweight protective clothing

**Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice

**MATERIAL SAFETY DATA SHEET**

Page 2 of 4

Review Date: 8/27/2001

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Form	powder
Color	colorless/white/slightly yellow
Odor	none to slightly acidic
pH (10% solution)	2.2 - 2.5
Vapor pressure	unknown
Vapor density	unknown
Boiling point	not applicable
Evaporation rate	unknown
Coefficient of water/oil distribution	unknown
Melting point/range	190 °C
Decomposition temperature	>190 °C
Relative density	1.65 g/cm <sup>3</sup>
Bulk density	700-800 kg/m <sup>3</sup>
Explosive properties	unknown
Water solubility g/kg	242 @ 20 °C

**10. STABILITY AND REACTIVITY**

Stability	Stable
Materials to avoid	Incompatible with strong bases and oxidizing agents.
Hazardous polymerization	Does not occur

**11. 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.		

**12. ECOLOGICAL INFORMATION**

Mobility	Completely soluble
Persistence and degradability	
Chemical oxygen demand	70% of BOD
Readily biodegradable	
Ecotoxicity effects	Toxicity to fish EC/LC0 =1000 mg/l
	Toxicity to bacterial EC/LC10 =90 mg/l

**13. 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).

**14. TRANSPORT INFORMATION**

Not regulated by DOT.

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The Buyer assumes all responsibility for using and handling the Product in accordance with applicable federal, state, and local regulations.

This MSDS shall not in any way limit or preclude the operation and effect of any of the provisions of Brenntag's terms and conditions of sale.

## MATERIAL SAFETY DATA SHEET

JUNGBUNZLAUER INC.  
Product: Ascorbic Acid

Page 3 of 4  
Review Date: 8/27/2001

### 15. REGULATORY INFORMATION

Ascorbic acid is generally regarded as safe (GRAS) by USA FDA. 21 CFR182.3013; 29CFR182.5013  
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 and Reauthorization Bill): Not Hazardous  
Foreign Inventory Status  
Canadian DSL (Domestic Substance List)

### 16. OTHER INFORMATION

HMIS\* Rating Health =2, Fire = 1, Reactivity =0  
\*Hazardous Materials Identification System of the National Paint and Coatings Association.

MSDS Status: Reviewed 8/27/2001 by Technical Service Department of Jungbunzlauer Inc.

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