Material Safety Data Sheet
l(+)-Ascorbic acid, reagent acs

ACC# 00817

Section 1 - Chemical Product and Company Identification

MSDS Name: l(+)-Ascorbic acid, reagent acs
Catalog Numbers: AC401470000, AC401471000, AC401475000
Synonyms: Vitamin C
Company Identification:
  Acros Organics N.V.
  One Reagent Lane
  Fair Lawn, NJ 07410
For information in North America, call: 800-ACROS-01
For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>EINECS/ELINCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-81-7</td>
<td>l(+)-Ascorbic acid</td>
<td></td>
<td>200-066-2</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: white to pale yellow crystalline powder.
Light sensitive. Air sensitive.
Target Organs: None known.

Potential Health Effects
Eye: May cause eye irritation.
Skin: May cause skin irritation. May be harmful if absorbed through the skin.
Ingestion: May cause irritation of the digestive tract. May be harmful if swallowed. Large doses may cause diarrhea and acidification of urine, which may cause stones in the urinary tract.
Inhalation: May cause respiratory tract irritation. May be harmful if inhaled.
Chronic: Not available.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Ingestion: Get medical aid. Wash mouth out with water.
Inhalation: Remove from exposure and move to fresh air immediately.
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.
Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.
Flash Point: Not available.
Autoignition Temperature: 380 deg C (716.00 deg F)
Explosion Limits, Lower: Not available.
Upper: Not available.
NFPA Rating: (estimated) Health: 1; Flammability: 0; Instability: 0

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.

Section 7 - Handling and Storage

Handling: Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes.
Storage: Store in a cool, dry place. Store in a tightly closed container.
Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate ventilation to keep airborne concentrations low.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>L(+)-Ascorbic acid</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

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

Personal Protective Equipment

Eyes: Not available.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

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: Crystalline powder

Appearance: white to pale yellow

Odor: Not available.

pH: 2.1-2.6 (5% aq.sol.)

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: Negligible.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: 190 - 192 deg C (decomp)

Decomposition Temperature: Not available.

Solubility: 333 g/l water (20°C)

Specific Gravity/Density: Not available.

Molecular Formula: C6H8O6

Molecular Weight: 176.13

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, light, exposure to air, heating to decomposition.

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#: 50-81-7: CI7650000

LD50/LC50:

CAS# 50-81-7:

Oral, mouse: LD50 = 3367 mg/kg;

Oral, rat: LD50 = 11900 mg/kg;

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

Epidemiology: No data available.

Teratogenicity: No data available.

Reproductive Effects: No data available.

Mutagenicity: No data available.

Neurotoxicity: No data available.

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. log Pow -2.15

Environmental: No information available.

Physical: No information available.

Other: 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**

<table>
<thead>
<tr>
<th>U.S. DOT</th>
<th>Canada TDG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipping Name:</td>
<td>Not regulated as a hazardous material</td>
</tr>
<tr>
<td>Hazard Class:</td>
<td></td>
</tr>
<tr>
<td>UN Number:</td>
<td></td>
</tr>
<tr>
<td>Packing Group:</td>
<td></td>
</tr>
</tbody>
</table>

**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 depletors.
- This material does not contain any Class 2 Ozone depletors.

**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: S 24/25 Avoid contact with skin and eyes.

**Safety Phrases:**
- 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
- not available.

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.

**Canadian Ingredient Disclosure List**

---

**Section 16 - Additional Information**

**MSDS Creation Date:** 2/25/1999
**Revision #3 Date:** 3/22/2006

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.