MSDS - L-Ascorbic Acid Ultra Fine Powder

1. Product and Company Identification

Product Name: Ascorbic Acid, Ultra Fine Powder
Common Chemical Name: L-Ascorbic Acid
Description/Use: Personal Care, Food Additive, Vitamin preparations
Distributor: Lotioncrafter LLC
532 Point Lawrence Rd.
Olga, WA 98279

2. Composition/Information on Ingredients

Characterization: Water soluble vitamin C of defined particle size class
CAS OR CHEMICAL NAME
L(+)-Ascorbic Acid
CAS Number: 50-81-7
EINECS Number: 200 066 2
Empirical Formula: C6H8O6

3. Hazards Identification

Most Important Hazards: No particular hazards known.

4. First Aid Measures

Skin contact: Remove contaminated clothes, wash affected skin with soap and water. Do not use any solvents.
Eye contact: Rinse immediately with tap water for 10 minutes – open eyelids forcibly..
Inhalation: Remove the casualty to fresh air and keep him/her calm.
Ingestion: Wash out mouth with water. Obtain medical attention if irritation develops.
Note to physician: Treat symptomatically.

5. Fire Fighting Measures

Suitable Extinguishing Media: Water, foam, dry chemical, or carbon dioxide.
Specific Hazards: Severe dust explosion hazard
Protection of Firefighters: Precipitate gases/vapors/mists with water spray
6. Spill or Leak Procedures

**Personal Precautions:** Use gloves and goggles

**Environmental Precautions:** Biodegradable product

**Methods of Cleanup:** Collect solids (avoid dust formation) and hand over to waste removal. Rinse with plenty of water.

7. Handling and Storage

**Handling:** Keep work area clean. Wash hands frequently. Use according to criteria of good industrial practice, avoid dispersion in the environment. Avoid dust formation; high dust explosion hazard. This product is not considered dangerous.

**Storage:** Keep container tightly closed when not in use. Protect from humidity, store below 25°C (77°F).

8. Exposure Controls/Personal Protection

**Ventilation:** Additional ventilation beyond that of general exhaust is not normally required. No exposure limits exist for the constituents of this product.

**Threshold Value Air:** IOEL: 10 mg/m³ (defined as 8-hour time-weighted average)

**Protective Equipment for Routine Use of Product**

**Respiratory Protection:** In case of high dust concentrations: particle mask or respirator with independent air supply.

**Skin Protection:** Wear suitable clothing.

**Eye Protection:** Use safety glasses with side shields.

**Hand Protection:** Protective gloves

**Exposure Limit Data**

<table>
<thead>
<tr>
<th>CHEMICAL NAME</th>
<th>CAS#</th>
<th>Name of Limit</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Data Found</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. Physical and Chemical Properties

**Physical State:** Very fine powder

**Color:** White to slightly yellow

**Odor** Almost odorless, with sharp acidic, pleasant taste

**Sieve Analysis:** 100 % through USP standard sieve no. 100 (Ø 150 μm)

≥ 95 % through USP standard sieve no. 200 (Ø 75 μm)

**Solubility:**

~ 300’000 mg/l, water (20 °C)

~ 400’000 mg/l, water (40 °C)

~ 50’000 mg/l, propylene glycol

~ 20’000 mg/l, ethanol absolute (20 °C)

~ 10’000 mg/l, glycerine

> 1’000 mg/l, acetone (23 °C)

virtually insoluble, diethyl ether

virtually insoluble, chloroform

virtually insoluble, petroleum ether

virtually insoluble, oils and fats

**Partition Coefficient:** log Pow -2.15 (octanol/water 23 °C)

**pH Value:** 3 (0.5 % aqueous solution)
2 (5% aqueous solution)

**Dissociation Constant:**
- \( pK_1 = 4.17 \)
- \( pK_2 = 11.57 \) (water)

**Melting Temperature:**
190 to 192 °C (with partial decomposition)

### 10. Stability and Reactivity

**Stability:**
Stable under the conditions mentioned in Section 7

**Conditions to avoid:**
- Humidity, warming

**Materials to avoid:**
- Oxidizing agents, atmospheric oxygen, bases, metals, metal salts

**Note:**
On prolonged storage, a yellow discoloration may occur through slow decomposition, which does not noticeably diminish biological activity, however in aqueous solutions ascorbic acid is very susceptible to oxidative decomposition, particularly in the presence of alkali resp. heavy metal ions

### 11. Toxicological Information

**Acute toxicity:**
- LD50 11'900 mg/kg (oral, rat)
- LD50 8'000 mg/kg (oral, mouse)

**Local effects:**

**Skin:**
May cause irritations; particularly in conjunction with humidity (perspiration)

**Mucous Membranes:**
May cause irritations

**Eye:**
May cause irritations

**Chronic Toxicity:**
In predisposed individuals 4-12 g/d may cause urinary calculus

**Mutagenicity:**
No suspicion of human mutagenicity

**Carcinogenicity:**
Not carcinogenic (several species)

**Reproduction Toxicity:**
Not teratogenic, not embryotoxic

**Note:**
Oral uptake of up to 9 g per day does not produce any serious toxic effects, however, even lesser quantities may cause diarrhea

RDA (recommended daily allowance): 60 mg

### 11. Ecological Information

**Inherent biodegradability:**
Well inherently biodegradable
- 97 %, 5 d
- 100 %, 15 d
  (Zahn-Wellens test, OECD No. 302 B)

**Ecotoxicity:**
Barely toxic for fish (rainbow trout)
- LC50 (96 h) 1020 mg/l
  (OECD No. 203)
- The inhibitory concentration relates to re-attachment to substrate
  (Dreissena polymorpha)
- MIC (48 h) > 50 mg/l (nominal concentration)

**Air Pollution:**
Observe local/national regulations

### 12. Disposal Considerations

**Waste from Residues:**
Observe local/national regulations regarding waste disposal
- Drain very small quantities into wastewater treatment plant
- Large amounts: incinerate in qualified installation with flue gas scrubbing

### 13. Transport Information

**Road (U.S. DOT):**
Not regulated

**Air (IATA):**
Not regulated
14. Regulatory Information

Note: No classification and labelling according to EU directives
Water Hazard Class (Germany): 1: weakly hazardous for water (according to annex 1 or 2 of
directive VwVwS of 17.05.1999)

15. Other information

Biological activity: 1 I.U. (international unit) of vitamin C corresponds to the activity of 50 μg
of pure ascorbic acid

Disclaimer:
************************************************************************************************
This document is generated for the purpose of distributing health, safety, and environmental data. It is not a
specification sheet nor should any displayed data be construed as a specification. The information on this MSDS was
obtained from sources which we believe are reliable. However, the information is provided without any warranty,
expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from
sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and
disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do
not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way
connected with handling, storage, use or disposal of this product. If the product is used as a component in another
product, this MSDS information may not be applicable.
*************************************************************************************************