



Material Safety Data Sheet

L-Citrulline DL-Malate MSDS

1. SUBSTANCE IDENTIFICATION

- 1.1. Product Name: [L-Citrulline DL-Malate](#)
- 1.2. Description: L-Citrulline DL-Malate is a Citrulline derivative manufactured through chemical synthesis.
- 1.3. Chemical Formula: C₁₀H₁₉N₃O₈
- 1.4. Molecular weight: 309.27316
- 1.5. CAS #: 54940-97-5
- 1.6. EINECS #: Not Applicable
- 1.7. Manufactured by: Foodchem International Corporation, Shanghai China.
- 1.8. Supplied by: Foodchem International Corporation, Shanghai China.
- 1.9. Usage: In food as nutritional supplements

2. Composition

- 2.1. L-Citrulline DL-Malate: >98%
- 2.2. Hazardous impurities: Negative

3. Physical/Chemical Characteristics

- 3.1. Physical State: Powder
- 3.2. Appearance: white powder
- 3.3. Odor: Not available
- 3.4. pH: Not available
- 3.5. Melting point/range: Not available
- 3.6. Boiling point: Not available
- 3.7. Bulk density: Not available
- 3.8. Solubility: Soluble in hot water

4. Stability/Reactivity

- 4.1. Chemical Stability: Stable under normal temperatures and pressures
- 4.2. Shelf Life: 24 months period
- 4.3. Hazardous decomposition: Carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂...)
- 4.4. Hazardous polymerization: Will not occur
- 4.5. Incompatible with: Strong oxidizing agents

5. Handling/Storage

- 5.1. Storage: Store in a cool and dry place and Keep away from strong light and heat
- 5.2. Handling precaution: Keep away from sources of ignition. Ground all equipment containing material.

6. Exposure Control

- 6.1. Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.
- 6.2. Respiratory protection: NIOSH/MSHA or European Standard EN 149 approved respirator
- 6.3. Eye Protection: Protective eyeglasses or chemical safety goggles
- 6.4. Skin Protection: Wear appropriate protective gloves and clothes to minimize skin contact.
- 6.5. Other: Consult professionals if L-Citrulline DL-Malate need to be handled under some special conditions.

7. Hazards Identification



- 7.1. Hazardous overview: L-Citrulline DL-Malate is Hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation.
- 7.2. Contact with eyes: May cause eye irritation.
- 7.3. Contact with skin: May cause skin irritation.
- 7.4. Ingestion: May irritate the tissues of the mouth, esophagus, and other tissues of the digestive system
- 7.5. Inhalation: May cause irritation to the respiratory tract and gastrointestinal
- 7.6. Other: Not Applicable

8. First Aid Measures

- 8.1. Contact with eyes: Flush immediately with plenty of water for 15 minutes and seek medical advice
- 8.2. Contact with skin: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops
- 8.3. Ingestion: Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.
- 8.4. Inhalation: Remove from exposure, move to fresh air and seek medical advice immediately.

9. Fire and Explosion Data

- 9.1. General information: May be combustible at high temperature.
- 9.2. Flash point: Not available
- 9.3. Ignition control: Avoid ignition sources where L-Citrulline DL-Malate powder might be generated.
- 9.4. Dust control: Keep the handling area with adequate ventilation
- 9.5. Extinguishing Media: Water spray, dry chemical or carbon dioxide
- 9.6. Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed.

10. Transport Information

- 10.1. No special requirements and no restrictions on transportation by land, sea or air.

11. Ecological Information

- 11.1. L-Citrulline DL-Malate is fully degradation biodegradable. The products of degradation are more toxic.

12. Other Information

- 12.1. This Safety Data Sheet of L-Citrulline DL-Malate is based upon a limited review of Foodchem International Corporation files and standard Toxicological handbooks. 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 Foodchem International Corporation 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 Foodchem International Corporation has been advised of the possibility of such damages.

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