



Health	0
Fire	0
Reactivity	0
Personal Protection	

Material Safety Data Sheet

L-Methionine

1: Chemical Product and Company Identification

Product Name: L-Methionine

Catalog Code: 41300020-1, 41300020-2

CAS#: 63-68-3

RTECS: PD0457000

TSCA: TSCA 8(b) inventory: L-Methionine

CI#: Not available.

Synonym: L-alpha-Amino-gamma-methylmercaptobutyric acid; (S)-2-Amino-4-(methylthio)butanoic acid; L(-)-Amino-gamma-methylthiobutyric acid; L-alpha-Amino-gamma-methylthiobutyric acid; Butanoic acid, 2-amino-4-(methylthio)-, (S)-; Cymethion; L-Homocysteine, S-methyl-; 1-Methionine; L(-)-Methionine; S-Methionine; L-gamma-Methylthio-alpha-aminobutyric acid

Chemical Name: Methionine

Chemical Formula: C₅H₁₁NO₂S

Contact information:

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In case of a chemical emergency, contact local hospital.

For non-emergency assistance, call: 1-800-860-9729

2: Composition and Information on Ingredients

Composition:

Name

L-Methionine

CAS#

63-68-3

% by Weight

-

Toxicological Data on Ingredients:

LD₅₀ (Oral, Rat): 36000 mg/kg

3: Hazards Identification

Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

4: First Aid Measures

Eye Contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.

Serious Skin Contact: Not available.

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

Serious Inhalation: Not available.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Product of Combustion: Carbon monoxide, Carbon dioxide, Nitrogen oxides, Sulfur oxides.

Fire Hazards in Presence of Various Substances: Slightly flammable to flammable in presence of open flames and sparks, of heat. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:
Not available.

Fire Fighting Media and Instructions:

SMALL FIRE: Dry chemical powder.

LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by

spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spill: Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

7: Handling and Storage

Precautions: Keep locked up. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Storage: Light Sensitive. Store in light-resistant container. Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 24°C (75.2°F).

8: Exposure Controls/Personal Protection

Engineering Controls: Safety shower and eye bath. Mechanical exhaust required.

Personal Protection: Respiratory: Wear dust mask.

Hand: Protective gloves.

Eye: Chemical safety goggles.

Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Dust respirator. Boots. Gloves.

Exposure Limits: Not available.

9: Physical and Chemical Properties

Physical State and Appearance: Solid. (Powdered solid)

Odor: Slight.

Taste: Sulfurous.

Molecular Weight: 149.21 g/mole

Color: White.

pH(1% soln/water): 5.85 [Acidic.]

Boiling Point: Not available.

Melting Point: 281°C (537.8 °F)

Critical Temperature: Not available.

Specific Gravity: Not available.

Vapour Pressure: Not available.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Soluble in cold water, methanol. Insoluble in diethyl ether, acetone. Insoluble in petroleum ether, absolute alcohol,

benzene. Soluble in warm diluted alcohol. Slightly soluble in acetic acid

10: Stability and Reactivity Data

Stability: Stable.

Instability Temperature: Not available.

Conditions of Instability: Light.

Incompatibility with various substances: Strong oxidizing agents.

Corrosivity: Not available.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

11: Toxicological Information

Routes of Entry: Skin contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:

LD₅₀ (Oral, Rat): 36000 mg/kg

LD₅₀ (Intraperitoneal, Rat): 4328 mg/kg

LD₅₀ (Intraperitoneal, Mouse): >9500 mg/kg

Chronic Effects on Humans: Mutagen: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.
Teratogen: Fetotoxicity

Other Toxic Effects on Humans: Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation.

Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion: May be harmful if swallowed.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: May cause adverse reproductive effects (female fertility and fetotoxicity) and birth defects (developmental abnormalities) based on animal data. No human data found at this time. May affect genetic material. [RTECS: DNA damage (Human cell), and unscheduled DNA synthesis (Human fibroblast cell)].

Special Remarks on other Toxic Effects on Humans: Not available.

12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Product of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not available.

13: Disposal Considerations

Waste Disposal: Waste must be disposed of in accordance with federal, state and local environmental control regulations.

14: Transport Information

DOT Classification: Not a DOT controlled material.

Identification: Not available.

Special Provisions for Transport: Not available.

15: Other Regulatory Information

Federal and State Regulations: TSCA 8(b) inventory: L-methionine

Other Regulations: Not available.

Other Classifications:

WHMIS(Canada): Not controlled under WHMIS (Canada).

DSCL(EEC): Not available.

HMIS(U.S.A.):

Health Hazard: 0

Fire Hazard: 0

Reactivity: 0

Personal Protection:

National Fire Protection Association (U.S.A.):

Health: 0

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment: Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Safety goggles.

16: Other Information

References: Not available.

Other Special Considerations: Not available.

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