

# Material Safety Data Sheet

## L-(+)-Selenomethionine MSDS

### Section 1: Chemical Product and Company Identification

**Product Name:** L-Selenomethionine

**Catalog Codes:** SLS2119

**CAS#:** 3211-76-5

**RTECS:** EK7713840

**TSCA:** TSCA 8(b) inventory: No products were found.

**CI#:** Not available.

**Synonym:** DL-2-Amino-4-(methylseleno)butanoic acid

**Chemical Name:** L(+) Selenomethionine

**Chemical Formula:** C5-H11-N-O2-Se

**Contact Information:**

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### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS #	% by Weight
{L-}Selenomethionine	3211-76-5	100

**Toxicological Data on Ingredients:** L-Selenomethionine LD50: Not available. LC50: Not available.

### Section 3: Hazards Identification

**Potential Acute Health Effects:**

Very hazardous in case of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant), of eye contact (irritant).

Severe over-exposure can result in death.

**Potential Chronic Health Effects:**

Very hazardous in case of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant), of eye contact (irritant).

CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC. MUTAGENIC EFFECTS: Not available. TERATOGENIC

EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to

blood, kidneys, the nervous system, liver, spleen, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

#### **Section 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. 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.

**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 immediately.

##### **Serious Inhalation:**

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

##### **Ingestion:**

If swallowed, 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 immediately.

**Serious Ingestion:** Not available.

#### **Section 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.

**Products of Combustion:** These products are carbon oxides (CO, CO<sub>2</sub>), nitrogen oxides (NO, NO<sub>2</sub>...).

##### **Fire Hazards in Presence of Various Substances:**

Slightly flammable to flammable in presence of heat. Non-flammable in presence of shocks.

##### **Explosion Hazards in Presence of Various Substances:**

Slightly explosive in presence of open flames and sparks. Non-explosive in presence of shocks.

##### **Fire Fighting Media and Instructions:**

SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

**Special Remarks on Fire Hazards:** As with most organic solids, fire is possible at elevated temperatures

**Special Remarks on Explosion Hazards:** Organic dusts can form explosive mixtures in air.

## **Section 6: Accidental Release Measures**

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

**Large Spill:**

Poisonous solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material.

Use water spray to

reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all

ignition sources. Call for

assistance on disposal.

## **Section 7: Handling and Storage**

**Precautions:**

Keep away from heat. Keep away from sources of ignition. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

**Storage:**

Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 8°C (46.4°F). Refrigerate

## **Section 8: Exposure Controls/Personal Protection**

**Engineering Controls:**

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection:** Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:**

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:** Not available.

## **Section 9: Physical and Chemical Properties**

**Physical state and appearance:** Solid. (Powdered solid.)

**Odor:** Characteristic.

**Taste:** Not available.

**Molecular Weight:** 196.11 g/mole

**Color:** White. Off-white.

**pH (1% soln/water):** Not available.

**Boiling Point:** Not available.

**Melting Point:** 265°C (509°F) - 267 C

**Critical Temperature:** Not available.

**Specific Gravity:** Not available.

**Vapor Pressure:** Not applicable.

**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:** Not available.

## **Section 10: Stability and Reactivity Data**

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Excess heat, dust generation, incompatible materials

**Incompatibility with various substances:** Reactive with oxidizing agents.

**Corrosivity:** Not available.

**Special Remarks on Reactivity:** Not available.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Will not occur.

## **Section 11: Toxicological Information**

**Routes of Entry:** Inhalation. Ingestion.

**Toxicity to Animals:**

LD50: Not available. LC50: Not available.

**Chronic Effects on Humans:**

CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC. May cause damage to the following organs: blood, kidneys, the nervous system, liver, spleen, central nervous system (CNS).

**Other Toxic Effects on Humans:**

Very hazardous in case of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant).

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:** Not available.

**Special Remarks on other Toxic Effects on Humans:**

Acute Potential Health Effects: Skin: May cause skin irritation. Eyes: Dust from L-selenomethionine (a selenium compound) can cause eye irritation. The selenium fume can also be irritating to the eyes.

Inhalation: Dust from L-selenomethionine (a selenium compound) can cause respiratory tract and mucous membrane irritation with coughing sneezing, breathing difficulty and headache. Inhalation of

dust from selenium compounds or selenium fume can also be irritating to the nose and throat, and can cause pulmonary edema, delayed in onset by 1 to 4 hours. Inhalation of selenium fumes can cause bronchospasm, chills, fever, headache, and chemical pneumonitis, symptoms similar to those of metal fume fever. Ingestion: May cause irritation of the gastrointestinal tract with nausea, abdominal pain, vomiting, diarrhea, hypersalivation. May affect, metabolism, behavior/central nervous system (somnolence), respiration (dyspnea), cardiovascular system CHRONIC CLINICAL EFFECTS: Skin: Prolonged or repeated contact may cause dry, red, scaly, itchy, papular dermatitis or may be associated with secondary infections. Eyes: Chronic exposure to from dust or fumes of selenium or selenium compounds fume cause ROSE EYE, a pink allergy of the eyelids often accompanied by swelling Ingestion and Inhalation: Occupational exposure to selenium or selenium compounds by ingestion or inhalation has been associated with a garlic odor of the breath, a metallic taste, gastrointestinal disturbances, bronchitis, skin eruptions, discoloration of skin, decayed bad teeth, loss/damage of nails and hair, pallor, lassitude, irritability, giddiness, convulsions, nervousness, drowsiness, and possible kidney damage or liver damage ((increase in hepatic enzymes, fatty degeneration, cirrhosis). It may also affect metabolism (weight loss). Chronic exposure by inhalation or ingestion can also produce symptoms that include coating of the tongue, anemia, lumbar pain, spleen damage, irritation of the mucosa. Note: Ingestion of approximately 5 mg per day of selenium has caused hair and nail damage, neurological and gastrointestinal symptoms, and (occasionally) jaundice and dermatitis. Note: The mean LOAEL for dietary selenium was calculated as approximately 1540 +/- 653 mcg/day (28 mcg/kg body weight). The maximum safe dietary level was calculated to be 819 +/- 125 mcg/day (15 mcg/kg) (Whanger et al, 1996).

## **Section 12: Ecological Information**

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products 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 products of degradation are less toxic than the product itself.

**Special Remarks on the Products of Biodegradation:** Not available.

## **Section 13: Disposal Considerations**

**Waste Disposal:**

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

## **Section 14: Transport Information**

**DOT Classification:** CLASS 6.1: Poisonous material.

**Identification:** : Selenium compound, n.o.s. (Selenomethionine) UNNA: 3283 PG: III

**Special Provisions for Transport:** Not available.

## **Section 15: Other Regulatory Information**

**Federal and State Regulations:** SARA 313 toxic chemical notification and release reporting:

L-Selenomethionine (selenium compound)

**Other Regulations:** OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

**Other Classifications:**

**WHMIS (Canada):** CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

**DSCL (EEC):**

R23/25- Toxic by inhalation and if swallowed. R33- Danger of cumulative effects. S24/25- Avoid contact with skin and eyes.

S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28- After contact with skin, wash immediately with plenty of water. S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.

S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**HMIS (U.S.A.):**

**Health Hazard:** 3

**Fire Hazard:** 1

**Reactivity:** 0

**Personal Protection:** E

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

**Health:** 2

**Flammability:** 0

**Reactivity:** 0

**Specific hazard:**

**Protective Equipment:**

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Safety glasses.

## **Section 16: Other Information**

**References:** Not available.

**Other Special Considerations:** Not available.

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