

COCREATE GLOBAL TECHNOLOGIES PRIVATE LIMITED

U21009KA2023PTC179006

Registered address: FFK Towers, #445, 2nd Floor, 17th Cross Road, Sector 4, HSR Layout, Bangalore, Bangalore South, Karnataka - 560102, India.

Email: info@scimplify.com

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SAFETY DATA SHEET
Dimethyl Malonate (≥99% for synthesis)

1. Identification

- **Product Name:** Dimethyl Malonate (≥99% for synthesis)
- **CAS Number:** 108-59-8
- **Relevant Uses:** Laboratory and analytical use
- **Supplier:** Cocreate Global Technologies Private Limited

2. Hazards Identification

- **GHS Classification:**
 - **Skin Irritation (Category 2) → H315** (Causes skin irritation)
 - **Eye Irritation (Category 2) → H319** (Causes serious eye irritation)
 - **STOT SE (Category 3) → H335** (May cause respiratory irritation)
 - **Label Elements:**
 - **Signal Word:** Warning
 - **Hazard Pictograms:** ![GHS07] (Irritant)
 - **Precautionary Statements:**
 - P261: Avoid breathing mist/vapors/spray.
 - P280: Wear protective gloves/eye protection.
 - P302+P352: If on skin, wash with soap and water.
 - P305+P351+P338: If in eyes, rinse cautiously with water.
 - **Other Hazards:**
 - Combustible but does not ignite readily.
 - Not classified as a **PBT** or **vPvB** substance.
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3. Composition / Information on Ingredients

- **Substance Name:** Dimethyl Malonate
 - **Molecular Formula:** $C_5H_8O_4$
 - **Molar Mass:** 132.1 g/mol
 - **CAS Number:** 108-59-8
 - **EC Number:** 203-597-8
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4. First Aid Measures

- **Inhalation:** Provide fresh air, seek medical advice if symptoms persist.
 - **Skin Contact:** Rinse with water, seek medical attention if irritation occurs.
 - **Eye Contact:** Rinse with water for at least 10 minutes, remove contact lenses if present.
 - **Ingestion:** Rinse mouth, seek medical attention if feeling unwell.
 - **Symptoms:** Irritation, cough, localized redness, edema, dyspnea.
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5. Fire-Fighting Measures

- **Suitable Extinguishing Media:** Water spray, alcohol-resistant foam, dry powder, CO_2 .
 - **Hazardous Combustion Products:** Carbon monoxide (CO), Carbon dioxide (CO_2).
 - **Firefighter Precautions:** Use self-contained breathing apparatus.
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6. Accidental Release Measures

- **Personal Precautions:** Avoid skin and eye contact, wear protective equipment.
 - **Environmental Precautions:** Prevent entry into drains or water sources.
 - **Cleanup Procedures:** Absorb with liquid-binding material (sand, diatomaceous earth).
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7. Handling and Storage

- **Handling Precautions:** Use in well-ventilated areas, avoid inhalation.
 - **Storage Conditions:** Store in a tightly closed container at **15-25°C**, away from light and moisture.
 - **Incompatible Substances:** Strong oxidizing agents.
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8. Exposure Control / Personal Protection

- **Engineering Controls:** Use local exhaust ventilation.
 - **Personal Protective Equipment (PPE):**
 - **Eye Protection:** Safety goggles with side protection.
 - **Hand Protection:** Butyl rubber gloves (0.5 mm thickness, >480 min breakthrough time).
 - **Respiratory Protection:** A-type respirator for organic vapors if aerosol formation occurs.
 - **Environmental Exposure Control:** Prevent release into water bodies.
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9. Physical and Chemical Properties

- **Physical State:** Liquid
- **Color:** Colorless
- **Odor:** Greenish yellow
- **Melting Point:** -61.9°C
- **Boiling Point:** 180°C
- **Flash Point:** 90°C
- **Autoignition Temperature:** 440°C
- **Water Solubility:** 143.3 g/L at 20°C
- **Partition Coefficient (log KOW):** -0.05

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- **Density:** 1.15 g/cm³
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10. Stability and Reactivity

- **Reactivity:** Vapors may form explosive mixtures with air if heated.
 - **Stability:** Stable under normal storage conditions.
 - **Hazardous Reactions:** Reacts violently with strong oxidizers.
 - **Conditions to Avoid:** UV radiation, direct sunlight, moisture.
 - **Hazardous Decomposition Products:** CO, CO₂.
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11. Toxicological Information

- **Acute Toxicity:** Not classified as acutely toxic (Oral LD50 > 2000 mg/kg in rats).
 - **Skin Corrosion/Irritation:** Causes skin irritation.
 - **Eye Damage/Irritation:** Causes serious eye irritation.
 - **Respiratory Sensitization:** May cause respiratory irritation.
 - **Carcinogenicity, Mutagenicity, Reproductive Toxicity:** No data available.
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12. Ecological Information

- **Aquatic Toxicity:**
 - **EC50 (48h, Invertebrates):** >1000 mg/L
 - **ErC50 (72h, Algae):** 386.4 mg/L
 - **Biodegradability:** Readily biodegradable (**86.5% degraded in 7 days**).
 - **Bioaccumulative Potential:** Does not significantly accumulate in organisms.
 - **Endocrine Disrupting Properties:** Not classified.
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13. Disposal Considerations

- **Waste Treatment:** Dispose of as hazardous waste.
 - **Sewage Disposal:** Do not empty into drains.
 - **Packaging Disposal:** Handle contaminated packaging as hazardous waste.
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14. Transport Information

- **UN Number:** Not subject to transport regulations.
 - **Transport Hazard Class:** None assigned.
 - **Packing Group:** Not assigned.
 - **Environmental Hazards:** Not classified as hazardous.
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15. Regulatory Information

- **Seveso Directive:** Not classified.
 - **VOC Content:** 100% (1.155 g/L).
 - **GB REACH, Annex 14 (SVHC):** Not listed.
 - **GB REACH, Annex 17 (Restrictions):** Not restricted.
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16. Other Information

- **Abbreviations:**
 - **PBT:** Persistent, Bioaccumulative, Toxic
 - **vPvB:** Very Persistent, Very Bioaccumulative
 - **GHS:** Globally Harmonized System
 - **STOT SE:** Specific Target Organ Toxicity - Single Exposure