

# DIMETHYL ADIPATE

DLA

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b> Adipic acid, dimethyl ester Dimethyl hexanedioate Hexanedioic acid, dimethyl ester Methyl adipate	Liquid                      Colorless
<p>Call fire department. Avoid contact with liquid. Notify local health and pollution control agencies. Protect water intakes.</p>	
<b>Fire</b>	Combustible. Extinguish with alcohol foam, dry chemical, or CO <sub>2</sub> . Wear self-contained breathing apparatus and protective clothing.
<b>Exposure</b>	CALL FOR MEDICAL AID.  VAPOR OR MIST Move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.  LIQUID Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water.
<b>Water Pollution</b>	Effect of low concentrations on aquatic life is unknown. Fouling to shoreline. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.

<p><b>1. CORRECTIVE RESPONSE ACTIONS</b></p> <ul style="list-style-type: none"> <li>Stop discharge</li> <li>Contain</li> <li>Collection Systems: Skim</li> <li>Clean shore line</li> <li>Salvage waterfowl</li> </ul>	<p><b>2. CHEMICAL DESIGNATIONS</b></p> <ul style="list-style-type: none"> <li>2.1 <b>CG Compatibility Group:</b> 34; Esters</li> <li>2.2 <b>Formula:</b> CH<sub>2</sub>O<sub>2</sub>(CH<sub>2</sub>)<sub>4</sub>CO<sub>2</sub>CH<sub>3</sub></li> <li>2.3 <b>IMO/UN Designation:</b> Currently not available</li> <li>2.4 <b>DOT ID No.:</b> Not listed</li> <li>2.5 <b>CAS Registry No.:</b> 627-93-0</li> <li>2.6 <b>NAERG Guide No.:</b> Not listed</li> <li>2.7 <b>Standard Industrial Trade Classification:</b> 51385</li> </ul>
<p><b>3. HEALTH HAZARDS</b></p> <ul style="list-style-type: none"> <li>3.1 <b>Personal Protective Equipment:</b> Self-contained breathing apparatus, rubber boots and heavy rubber gloves.</li> <li>3.2 <b>Symptoms Following Exposure:</b> May be harmful by inhalation, ingestion, or skin absorption. May cause irritation.</li> <li>3.3 <b>Treatment of Exposure:</b> INHALATION: Call for medical aid. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. EYES: Flush immediately with copious amounts of water for at least 15 minutes. SKIN: Wash immediately with soap and copious amounts of water.</li> <li>3.4 <b>TLV-TWA:</b> Not listed.</li> <li>3.5 <b>TLV-STEL:</b> Not listed.</li> <li>3.6 <b>TLV-Ceiling:</b> Not listed.</li> <li>3.7 <b>Toxicity by Ingestion:</b> Currently not available</li> <li>3.8 <b>Toxicity by Inhalation:</b> Currently not available.</li> <li>3.9 <b>Chronic Toxicity:</b> Prolonged exposure may result in infertility or infant developmental abnormalities.</li> <li>3.10 <b>Vapor (Gas) Irritant Characteristics:</b> Vapors cause a slight smarting of the eyes or respiratory system if present in high concentrations. The effect is temporary.</li> <li>3.11 <b>Liquid or Solid Characteristics:</b> Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of skin.</li> <li>3.12 <b>Odor Threshold:</b> Currently not available</li> <li>3.13 <b>IDLH Value:</b> Not listed.</li> <li>3.14 <b>OSHA PEL-TWA:</b> Not listed.</li> <li>3.15 <b>OSHA PEL-STEL:</b> Not listed.</li> <li>3.16 <b>OSHA PEL-Ceiling:</b> Not listed.</li> <li>3.17 <b>EPA AEGL:</b> Not listed</li> </ul>	

<p><b>4. FIRE HAZARDS</b></p> <ul style="list-style-type: none"> <li>4.1 <b>Flash Point:</b> 225°F C.C.</li> <li>4.2 <b>Flammable Limits in Air:</b> LEL: 0.81% - UEL 8.1%</li> <li>4.3 <b>Fire Extinguishing Agents:</b> Carbon dioxide, dry chemical, alcohol foam.</li> <li>4.4 <b>Fire Extinguishing Agents Not to Be Used:</b> Currently not available</li> <li>4.5 <b>Special Hazards of Combustion Products:</b> Currently not available</li> <li>4.6 <b>Behavior in Fire:</b> Currently not available</li> <li>4.7 <b>Auto Ignition Temperature:</b> 680°F</li> <li>4.8 <b>Electrical Hazards:</b> Currently not available</li> <li>4.9 <b>Burning Rate:</b> Currently not available</li> <li>4.10 <b>Adiabatic Flame Temperature:</b> Currently not available</li> <li>4.11 <b>Stoichiometric Air to Fuel Ratio:</b> 45.2 (calc.)</li> <li>4.12 <b>Flame Temperature:</b> Currently not available</li> <li>4.13 <b>Combustion Molar Ratio (Reactant to Product):</b> 15.0 (calc.)</li> <li>4.14 <b>Minimum Oxygen Concentration for Combustion (MOCC):</b> Not listed</li> </ul>	<p><b>7. SHIPPING INFORMATION</b></p> <ul style="list-style-type: none"> <li>7.1 <b>Grades of Purity:</b> 99+%</li> <li>7.2 <b>Storage Temperature:</b> Ambient</li> <li>7.3 <b>Inert Atmosphere:</b> Not required.</li> <li>7.4 <b>Venting:</b> Not required.</li> <li>7.5 <b>IMO Pollution Category:</b> B</li> <li>7.6 <b>Ship Type:</b> 3</li> <li>7.7 <b>Barge Hull Type:</b> Currently not available</li> </ul>
<p><b>5. CHEMICAL REACTIVITY</b></p> <ul style="list-style-type: none"> <li>5.1 <b>Reactivity with Water:</b> No reaction.</li> <li>5.2 <b>Reactivity with Common Materials:</b> No reaction.</li> <li>5.3 <b>Stability During Transport:</b> Stable.</li> <li>5.4 <b>Neutralizing Agents for Acids and Caustics:</b> Data not pertinent.</li> <li>5.5 <b>Polymerization:</b> Will not occur.</li> <li>5.6 <b>Inhibitor of Polymerization:</b> Data not pertinent.</li> </ul>	<p><b>8. HAZARD CLASSIFICATIONS</b></p> <ul style="list-style-type: none"> <li>8.1 <b>49 CFR Category:</b> Not listed.</li> <li>8.2 <b>49 CFR Class:</b> Not pertinent</li> <li>8.3 <b>49 CFR Package Group:</b> Not listed.</li> <li>8.4 <b>Marine Pollutant:</b> No</li> <li>8.5 <b>NFPA Hazard Classification:</b> Not listed</li> <li>8.6 <b>EPA Reportable Quantity:</b> Not listed.</li> <li>8.7 <b>EPA Pollution Category:</b> Not listed.</li> <li>8.8 <b>RCRA Waste Number:</b> Not listed</li> <li>8.9 <b>EPA FWPCA List:</b> Not listed</li> </ul>
<p><b>6. WATER POLLUTION</b></p> <ul style="list-style-type: none"> <li>6.1 <b>Aquatic Toxicity:</b> Currently not available</li> <li>6.2 <b>Waterfowl Toxicity:</b> Currently not available</li> <li>6.3 <b>Biological Oxygen Demand (BOD):</b> Currently not available</li> <li>6.4 <b>Food Chain Concentration Potential:</b> Currently not available</li> <li>6.5 <b>GESAMP Hazard Profile:</b> Bioaccumulation: 0 Damage to living resources: 3 Human Oral hazard: 0 Human Contact hazard: 1 Reduction of amenities: 0</li> </ul>	<p><b>9. PHYSICAL &amp; CHEMICAL PROPERTIES</b></p> <ul style="list-style-type: none"> <li>9.1 <b>Physical State at 15° C and 1 atm:</b> Liquid</li> <li>9.2 <b>Molecular Weight:</b> 174.20</li> <li>9.3 <b>Boiling Point at 1 atm:</b> 228.2-230°F = 109-110°C = 382.2-283.2°K (at 14 mm Hg= 0.0184 atm)</li> <li>9.4 <b>Freezing Point:</b> 46.4°F = 8°C = 281.2°K</li> <li>9.5 <b>Critical Temperature:</b> Currently not available</li> <li>9.6 <b>Critical Pressure:</b> Currently not available</li> <li>9.7 <b>Specific Gravity:</b> 1.063</li> <li>9.8 <b>Liquid Surface Tension:</b> Currently not available</li> <li>9.9 <b>Liquid Water Interfacial Tension:</b> Currently not available</li> <li>9.10 <b>Vapor (Gas) Specific Gravity:</b> 6.0 (est.)</li> <li>9.11 <b>Ratio of Specific Heats of Vapor (Gas):</b> Currently not available</li> <li>9.12 <b>Latent Heat of Vaporization:</b> Currently not available</li> <li>9.13 <b>Heat of Combustion:</b> Currently not available</li> <li>9.14 <b>Heat of Decomposition:</b> Currently not available</li> <li>9.15 <b>Heat of Solution:</b> Currently not available</li> <li>9.16 <b>Heat of Polymerization:</b> Currently not available</li> <li>9.17 <b>Heat of Fusion:</b> Currently not available</li> <li>9.18 <b>Limiting Value:</b> Currently not available</li> <li>9.19 <b>Reid Vapor Pressure:</b> Currently not available</li> </ul>

NOTES

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9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
	C U R R E N T L Y  N O T  A V A I L A B L E		C U R R E N T L Y  N O T  A V A I L A B L E		C U R R E N T L Y  N O T  A V A I L A B L E		C U R R E N T L Y  N O T  A V A I L A B L E

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
	I N S O L U B L E		C U R R E N T L Y  N O T  A V A I L A B L E		C U R R E N T L Y  N O T  A V A I L A B L E		0            0.247 25          0.257 50          0.267 75          0.276 100        0.285 125        0.294 150        0.304 175        0.312 200        0.321 225        0.330 250        0.338 275        0.347 300        0.355 325        0.363 350        0.371 375        0.379 400        0.387 425        0.395 450        0.402 475        0.410 500        0.417 525        0.424 550        0.431 575        0.438 600        0.444