

# DIOCTYL ADIPATE

DOA

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b> Adipic acid, bis (2-ethylhexyl) ester Adipol 2EH Di (2-ethylhexyl) adipate DOA	Oily liquid  Colorless  Odorless  Floats on water.
Call fire department. Avoid contact with liquid. Notify local health and pollution control agencies. Protect water intakes.	
<b>Fire</b>	Combustible. Extinguish with foam, dry chemical, or carbon dioxide. Water may be ineffective on fire.
<b>Exposure</b>	CALL FOR MEDICAL AID.  LIQUID Irritating to eyes. 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.

### 1. CORRECTIVE RESPONSE ACTIONS

Stop discharge  
Contain  
Collection Systems: Skim  
Clean shore line  
Salvage waterfowl

### 2. CHEMICAL DESIGNATIONS

- 2.1 **CG Compatibility Group:** Currently not available; Ester  
2.2 **Formula:**  $C_{18}H_{34}O_4$   
2.3 **IMO/UN Designation:** Not listed  
2.4 **DOT ID No.:** Not listed  
2.5 **CAS Registry No.:** Currently not available  
2.6 **NAERG Guide No.:** Not listed  
2.7 **Standard Industrial Trade Classification:** 51385

### 3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** None required  
3.2 **Symptoms Following Exposure:** Low toxicity; no reports of injury in industrial handling.  
3.3 **Treatment of Exposure:** CONTACT WITH SKIN AND EYES: wipe off and wash skin with soap and water. Treat like lubricating oil. Flush eyes with water. Remove to fresh air.  
3.4 **TLV-TWA:** Not listed.  
3.5 **TLV-STEL:** Not listed.  
3.6 **TLV-Ceiling:** Not listed.  
3.7 **Toxicity by Ingestion:** Grade 1;  $LD_{50}$  = 5 to 15 g/kg  
3.8 **Toxicity by Inhalation:** Currently not available.  
3.9 **Chronic Toxicity:** None  
3.10 **Vapor (Gas) Irritant Characteristics:** Vapors are nonirritating to the eyes and throat.  
3.11 **Liquid or Solid Characteristics:** Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of the skin.  
3.12 **Odor Threshold:** Odorless  
3.13 **IDLH Value:** Not listed.  
3.14 **OSHA PEL-TWA:** Not listed.  
3.15 **OSHA PEL-STEL:** Not listed.  
3.16 **OSHA PEL-Ceiling:** Not listed.  
3.17 **EPA AEGL:** Not listed

### 4. FIRE HAZARDS

- 4.1 **Flash Point:** 390°F O.C.  
4.2 **Flammable Limits in Air:** Currently not available  
4.3 **Fire Extinguishing Agents:** Currently not available  
4.4 **Fire Extinguishing Agents Not to Be Used:** Currently not available  
4.5 **Special Hazards of Combustion Products:** None  
4.6 **Behavior in Fire:** Not pertinent  
4.7 **Auto Ignition Temperature:** Currently not available  
4.8 **Electrical Hazards:** Currently not available  
4.9 **Burning Rate:** Currently not available  
4.10 **Adiabatic Flame Temperature:** Currently not available  
4.11 **Stoichiometric Air to Fuel Ratio:** 145.2 (calc.)  
4.12 **Flame Temperature:** Currently not available  
4.13 **Combustion Molar Ratio (Reactant to Product):** 43.0 (calc.)  
4.14 **Minimum Oxygen Concentration for Combustion (MOCC):** Not listed

### 5. CHEMICAL REACTIVITY

- 5.1 **Reactivity with Water:** No reaction  
5.2 **Reactivity with Common Materials:** No reaction  
5.3 **Stability During Transport:** Stable  
5.4 **Neutralizing Agents for Acids and Caustics:** Not pertinent  
5.5 **Polymerization:** Not pertinent  
5.6 **Inhibitor of Polymerization:** Not pertinent

### 6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:** Currently not available  
6.2 **Waterfowl Toxicity:** Currently not available  
6.3 **Biological Oxygen Demand (BOD):** Currently not available  
6.4 **Food Chain Concentration Potential:** None  
6.5 **GESAMP Hazard Profile:** Not listed

### 7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** 99.6%  
7.2 **Storage Temperature:** Ambient  
7.3 **Inert Atmosphere:** No requirement  
7.4 **Venting:** Open  
7.5 **IMO Pollution Category:** D  
7.6 **Ship Type:** Data not available  
7.7 **Barge Hull Type:** Currently not available

### 8. HAZARD CLASSIFICATIONS

- 8.1 **49 CFR Category:** Not listed  
8.2 **49 CFR Class:** Not pertinent  
8.3 **49 CFR Package Group:** Not listed.  
8.4 **Marine Pollutant:** No  
8.5 **NFPA Hazard Classification:** Not listed  
8.6 **EPA Reportable Quantity:** Not listed.  
8.7 **EPA Pollution Category:** Not listed.  
8.8 **RCRA Waste Number:** Not listed  
8.9 **EPA FWPCA List:** Not listed

### 9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 **Physical State at 15° C and 1 atm:** Liquid  
9.2 **Molecular Weight:** 371  
9.3 **Boiling Point at 1 atm:** Very high  
9.4 **Freezing Point:** Not pertinent  
9.5 **Critical Temperature:** Not pertinent  
9.6 **Critical Pressure:** Not pertinent  
9.7 **Specific Gravity:** 0.928 at 20°C (liquid)  
9.8 **Liquid Surface Tension:** (est.) 15 dynes/cm = 0.015 N/m at 20°C  
9.9 **Liquid Water Interfacial Tension:** (est.) 30 dynes/cm = 0.03 N/m at 20°C  
9.10 **Vapor (Gas) Specific Gravity:** Not pertinent  
9.11 **Ratio of Specific Heats of Vapor (Gas):** Not pertinent  
9.12 **Latent Heat of Vaporization:** Not pertinent  
9.13 **Heat of Combustion:** -15,430 Btu/lb = -8580 cal/g = -359 X 10<sup>3</sup> J/kg  
9.14 **Heat of Decomposition:** Not pertinent  
9.15 **Heat of Solution:** Not pertinent  
9.16 **Heat of Polymerization:** Not pertinent  
9.17 **Heat of Fusion:** Currently not available  
9.18 **Limiting Value:** Currently not available  
9.19 **Reid Vapor Pressure:** Currently not available

### 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
60	58.210	85	0.452	32	1.040	55	15.450
61	58.170	90	0.455	34	1.040	60	14.460
62	58.140	95	0.459	36	1.040	65	13.560
63	58.100	100	0.462	38	1.040	70	12.730
64	58.070	105	0.465	40	1.040	75	11.960
65	58.030	110	0.468	42	1.040	80	11.250
66	58.000	115	0.471	44	1.040	85	10.600
67	57.960	120	0.475	46	1.040	90	9.994
68	57.930	125	0.478	48	1.040	95	9.434
69	57.890	130	0.481	50	1.040	100	8.914
70	57.860	135	0.484	52	1.040	105	8.431
71	57.820	140	0.487	54	1.040	110	7.983
72	57.790	145	0.491	56	1.040	115	7.565
73	57.750	150	0.494	58	1.040	120	7.176
74	57.720			60	1.040	125	6.813
75	57.690			62	1.040	130	6.474
76	57.650			64	1.040	135	6.157
77	57.620			66	1.040	140	5.860
78	57.580			68	1.040		
79	57.550			70	1.040		
80	57.510			72	1.040		
81	57.480			74	1.040		
82	57.440			76	1.040		
83	57.410						
84	57.370						
85	57.340						

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 I L E		N O T  P E R T I N E N T		N O T  P E R T I N E N T		N O T  P E R T I N E N T