DI-(2-ETHYLHEXYL) PHTHALATE

DIE

CAUTIONARY RESPONSE INFORMATION

Common Synonyms			
DEHP Di-sec-octyl phthalate Bis-(2-Ethylhexyl)phthalate Phthalic acid, bis-(2-ethylhexyl ester)	Oily liquid Floats on water.	Colorless	Odorless

Keep people away. Avoid contact with liquid and vapor.
Wear goggles, self-contained breathing apparatus, and rubber overclothing (including gloves).
Shut off ignition sources and call fire department.
Notify local health and pollution control agencies.

Fire	Combustible. Toxic vapors and gases may be released in fire. Wear self-contained breathing apparatus and rubber overclothing (including gloves). Extinguish with dry chemical, alcohol foam, or carbon dioxide.
Exposure	Call for medical aid. Move to fresh air. Remove contaminated clothing and shoes. Wash affected areas with plenty of soap and water. IF IN EYES, hold eyelids open and flush with plenty of water.
Water Pollution	Effect of low concentrations on aquatic life is unknown. 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

2. CHEMICAL DESIGNATIONS

2.1 CG Compatibility Group: 34; Esters
2.2 Formula: $C_6H_4(COOCH_2CH(C_2H_5)(CH_2)_3CH_3)_2$
2.3 IMO/UN Designation: Not listed.
2.4 DOT ID No.: Not listed.
2.5 CAS Registry No.: 117-81-7
2.6 NAERG Guide No.: Not listed
2.7 Standard Industrial Trade Classification: 51385

3. HEALTH HAZARDS

3.1 Personal Protective Equipment: Chemical protective clothing, gloves, and other appropriate protective clothing to prevent skin contact. Contact lenses should not be worn when working with this material. Use self-contained breathing apparatus if vapor concentrations are present.
3.2 Symptoms Following Exposure: Exposure can cause gastric distrubances and diarrhea. Skin sensitization and irritation of the eyes, skin and respiratory tract can also occur.
3.3 Treatment of Exposure: Call for medical aid. INHALATION: Move to fresh air. EYES: Flush with plenty of water for at least 15 mins., lifting lids occasionally. SKIN: Wash immediately with soap and water. INGESTION: Give 1-2 glasses of water or milk, then induce vomiting.
3.4 TLV-TWA: 5 mg/m^3
3.5 TLV-STEL: 10 mg/m^3
3.6 TLV-Ceiling: Not listed.
3.7 Toxicity by Ingestion: Currently not available
3.8 Toxicity by Inhalation: Currently not available.
3.9 Chronic Toxicity: Subchronic inhalation by rats or mice caused pulmonary irritation, congestion of liver and kidneys, renal cysts, bladder stones, and increased liver metabolism. Chronic inhalation by mice or rats caused liver cancer.
3.10 Vapor (Gas) Irritant Characteristics: Vapors cause moderate irritation such that personnel will find high concentrations unpleasant. The effect is temporary.
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: Currently not available
3.13 IDLH Value: 5,000 mg/m^3
3.14 OSHA PEL-TWA: 5 mg/m^3
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: 425°F O.C.
4.2 Flammable Limits in Air: LEL: 0.3% @ 474°F.
4.3 Fire Extinguishing Agents: Dry chemical, carbon dioxide, or alcohol foam.
4.4 Fire Extinguishing Agents Not to Be Used: Water or foam may cause frothing.
4.5 Special Hazards of Combustion Products: Toxic vapors and gases, such as carbon monoxide, may be released in a fire.
4.6 Behavior in Fire: Currently not available
4.7 Auto Ignition Temperature: 735°F.
4.8 Electrical Hazards: Not listed.
4.9 Burning Rate: Currently not available
4.10 Adiabatic Flame Temperature: Currently not available
4.11 Stoichometric Air to Fuel Ratio: 149.9 (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: Incompatible with nitrates, strong oxidizers, strong alkalis, or strong acids. Reactions with these compounds may cause fires and explosions.
5.3 Stability During Transport: Stable.
5.4 Neutralizing Agents for Acids and Caustics: Not pertinent.
5.5 Polymerization: Will not polymerize.
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:
Bioaccumulation: 0
Damage to living resources: 0
Human Oral hazard: 0
Human Contact hazard: II
Reduction of amenities: XX

7. SHIPPING INFORMATION

7.1 Grades of Purity: 99%; Technical grades.
7.2 Storage Temperature: Ambient.
7.3 Inert Atmosphere: No requirement.
7.4 Venting: Not listed.
7.5 IMO Pollution Category: D
7.6 Ship Type: Data not avaialable
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: 100 pounds
8.7 EPA Pollution Category: B
8.8 RCRA Waste Number: U028
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: 390.6
9.3 Boiling Point at 1 atm: 727°F = 386°C = 659°K
9.4 Freezing Point: –58°F = –50°C = 223°K
9.5 Critical Temperature: Currently not available
9.6 Critical Pressure: Currently not available
9.7 Specific Gravity: 0.9861
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: 16
9.11 Ratio of Specific Heats of Vapor (Gas): Currently not available
9.12 Latent Heat of Vaporization: Currently not available
9.13 Heat of Combustion: Currently not available
9.14 Heat of Decomposition: Currently not available
9.15 Heat of Solution: Currently not available
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
	CURRENTLY NOT AVAILABLE		CURRENTLY NOT AVAILABLE		CURRENTLY NOT AVAILABLE		CURRENTLY NOT AVAILABLE

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
68	0.005	68 392	0.000 0.026	68 392	0.00001 0.00109		CURRENTLY NOT AVAILABLE