

# DIETHYLBENZENE

DEB

## CAUTIONARY RESPONSE INFORMATION

Common Synonyms	Liquid  Floats on water.	Colorless  Sweet, gasoline-like odor
Keep people away. Call fire department. Avoid contact with liquid. Notify local health and pollution control agencies.		
Fire	Combustible. Extinguish with water, dry chemical, foam, or carbon dioxide. Cool exposed containers with water.	
Exposure	CALL FOR MEDICAL AID.  LIQUID Irritating to skin and eyes. Remove contaminated clothing and shoes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water.	
Water Pollution	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  
Chemical and Physical Treatment: Burn  
Clean shore line  
Salvage waterfowl

## 2. CHEMICAL DESIGNATIONS

- 2.1 CG Compatibility Group: 32; Aromatic Hydrocarbon
- 2.2 Formula:  $C_8H_{10}$
- 2.3 IMO/UN Designation: 3.3/2049
- 2.4 DOT ID No.: 2049
- 2.5 CAS Registry No.: 1300-82-9
- 2.6 NAERG Guide No.: 130
- 2.7 Standard Industrial Trade Classification: 51129

## 3. HEALTH HAZARDS

- 3.1 Personal Protective Equipment: Self-contained breathing apparatus, safety goggles
- 3.2 Symptoms Following Exposure: High vapor concentrations produce eye and respiratory tract irritation, dizziness, depression. Liquid irritates and may blister skin, can cause corneal injury to eye.
- 3.3 Treatment of Exposure: INHALATION: remove to fresh air and start artificial respiration.  
INGESTION: do NOT induce vomiting; call a doctor. CONTACT WITH EYES AND SKIN: flush with water for 15 min. Wash skin with soap and water.
- 3.4 TLV-TWA: Not listed.
- 3.5 TLV-STEL: Not listed.
- 3.6 TLV-Ceiling: Not listed.
- 3.7 Toxicity by Ingestion: Grade 2; oral rat LD<sub>50</sub> = 1.2 g/kg
- 3.8 Toxicity by Inhalation: Currently not available.
- 3.9 Chronic Toxicity: Currently not available.
- 3.10 Vapor (Gas) Irritant Characteristics: Vapors cause a slight smarting of the eyes and respiratory system if present in high concentrations. 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: 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 A EGL: Not listed

## 4. FIRE HAZARDS

- 4.1 Flash Point: 135°F C.C.
- 4.2 Flammable Limits in Air: Currently not available
- 4.3 Fire Extinguishing Agents: Foam, water, carbon dioxide, or dry chemical
- 4.4 Fire Extinguishing Agents Not to Be Used: Not pertinent
- 4.5 Special Hazards of Combustion Products: Not pertinent
- 4.6 Behavior in Fire: Not pertinent
- 4.7 Auto Ignition Temperature: 743°F (ortho)
- 4.8 Electrical Hazards: Not pertinent
- 4.9 Burning Rate: Currently not available
- 4.10 Adiabatic Flame Temperature: Currently not available
- 4.11 Stoichiometric Air to Fuel Ratio: 64.3 (calc.)
- 4.12 Flame Temperature: Currently not available
- 4.13 Combustion Molar Ratio (Reactant to Product): 17.0 (calc.)
- 4.14 Minimum Oxygen Concentration for Combustion (MOCC): N<sub>2</sub> diluent: 8.5%

## 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:  
Bioaccumulation: T  
Damage to living resources: 3  
Human Oral hazard: 1  
Human Contact hazard: I  
Reduction of amenities: X

## 7. SHIPPING INFORMATION

- 7.1 Grades of Purity: Technical (mixture of isomers)
- 7.2 Storage Temperature: Ambient
- 7.3 Inert Atmosphere: No requirement
- 7.4 Venting: Open (flame arrester)
- 7.5 IMO Pollution Category: A
- 7.6 Ship Type: 2
- 7.7 Barge Hull Type: Currently not available

## 8. HAZARD CLASSIFICATIONS

- 8.1 49 CFR Category: Flammable liquid
- 8.2 49 CFR Class: 3
- 8.3 49 CFR Package Group: III
- 8.4 Marine Pollutant: Yes
- 8.5 NFPA Hazard Classification:  

Category	Classification
Health Hazard (Blue)	2
Flammability (Red)	2
Instability (Yellow)	0
- 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: 134.21
- 9.3 Boiling Point at 1 atm: 356°F = 180°C = 453°K
- 9.4 Freezing Point: < 160°F = < 70°C = < 343°K
- 9.5 Critical Temperature: Not pertinent
- 9.6 Critical Pressure: Not pertinent
- 9.7 Specific Gravity: 0.86 at 20°C (liquid)
- 9.8 Liquid Surface Tension: 30 dynes/cm = 0.030 N/m at 20°C
- 9.9 Liquid Water Interfacial Tension: Currently not available
- 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: 140 Btu/lb = 77 cal/g = 3.2 X 10<sup>5</sup> J/kg
- 9.13 Heat of Combustion: -17,800 Btu/lb = -9890 cal/g = -414 X 10<sup>5</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: 0.05 psia

## 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
34	55.110	51	0.459	42	1.040	50	0.878
36	55.040	52	0.459	44	1.040	52	0.862
38	54.970	53	0.459	46	1.040	54	0.846
40	54.900	54	0.459	48	1.040	56	0.831
42	54.830	55	0.459	50	1.040	58	0.817
44	54.770	56	0.459	52	1.040	60	0.802
46	54.700	57	0.459	54	1.040	62	0.788
48	54.630	58	0.459	56	1.040	64	0.775
50	54.560	59	0.459	58	1.040	66	0.762
52	54.490	60	0.459	60	1.040	68	0.749
54	54.420	61	0.459	62	1.040	70	0.736
56	54.350	62	0.459	64	1.040	72	0.724
58	54.280	63	0.459	66	1.040	74	0.712
60	54.210	64	0.459	68	1.040	76	0.700
62	54.140	65	0.459	70	1.040	78	0.689
64	54.070	66	0.459	72	1.040	80	0.677
66	54.000	67	0.459	74	1.040	82	0.666
68	53.930	68	0.459	76	1.040	84	0.656
70	53.860	69	0.459				
72	53.790	70	0.459				
74	53.730	71	0.459				
76	53.660	72	0.459				
78	53.590	73	0.459				
80	53.520	74	0.459				
82	53.450	75	0.459				
84	53.380	76	0.459				

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	110		0.068	110	0.00150	N	
N	120		0.093	120	0.00200	O	
S	130		0.125	130	0.00265	T	
O	140		0.167	140	0.00348		
L	150		0.220	150	0.00452	P	
U	160		0.288	160	0.00582	E	
B	170		0.374	170	0.00743	R	
L	180		0.482	180	0.00942	T	
E	190		0.616	190	0.01185	I	
	200		0.781	200	0.01480	N	
	210		0.983	210	0.01835	O	
	220		1.229	220	0.02261	T	
	230		1.527	230	0.02769	P	
	240		1.886	240	0.03370	E	
	250		2.315	250	0.04079	R	
	260		2.826	260	0.04909	T	
	270		3.430	270	0.05877	I	
	280		4.142	280	0.07001	N	
	290		4.976	290	0.08299	O	
	300		5.950	300	0.09793	T	