

DODECANOL

DDN

CAUTIONARY RESPONSE INFORMATION

Common Synonyms Dodecyl alcohol Lauryl alcohol	Thick liquid Colorless Sweet odor Floats on water. Freezing point is 75°F.
Call fire department. Avoid contact with liquid. Notify local health and pollution control agencies.	
Fire	Combustible. Extinguish with dry chemical, alcohol foam, or carbon dioxide. Water may be ineffective on fire. Cool exposed containers with water.
Exposure	CALL FOR MEDICAL AID. LIQUID Irritating to skin. Will burn eyes. 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
Clean shore line
Salvage waterfowl

2. CHEMICAL DESIGNATIONS

- 2.1 CG Compatibility Group: 20; Alcohols, glycols
2.2 Formula: $\text{CH}_3(\text{CH}_2)_{10}\text{CH}_2\text{OH}$
2.3 IMO/UN Designation: Not listed
2.4 DOT ID No.: Not listed
2.5 CAS Registry No.: 112-53-8
2.6 NAERG Guide No.: Not listed
2.7 Standard Industrial Trade Classification: 51229

3. HEALTH HAZARDS

- 3.1 Personal Protective Equipment: Chemical gloves; chemical goggles
3.2 Symptoms Following Exposure: Liquid will cause burning of the eyes and may irritate skin.
3.3 Treatment of Exposure: SKIN OR EYES: wash exposed areas with 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 1; $\text{LD}_{50} = 5.5$ to 15 g/kg (humans)
3.8 Toxicity by Inhalation: Currently not available.
3.9 Chronic Toxicity: Currently not available
3.10 Vapor (Gas) Irritant Characteristics: None
3.11 Liquid or Solid Characteristics: No appreciable hazard. Practically harmless to 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 AEGL: Not listed

4. FIRE HAZARDS

- 4.1 Flash Point: 260°F C.C.
4.2 Flammable Limits in Air: Currently not available
4.3 Fire Extinguishing Agents: Alcohol foam, carbon dioxide, dry chemical
4.4 Fire Extinguishing Agents Not to Be Used: Water or foam may cause frothing.
4.5 Special Hazards of Combustion Products: Not pertinent
4.6 Behavior in Fire: Not pertinent
4.7 Auto Ignition Temperature: 527°F
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: 85.7 (calc.)
4.12 Flame Temperature: Currently not available
4.13 Combustion Molar Ratio (Reactant to Product): 25.0 (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): 30% (theor.), 5 days
6.4 Food Chain Concentration Potential: None
6.5 GESAMP Hazard Profile: Not listed

7. SHIPPING INFORMATION

- 7.1 Grades of Purity: 98.5-99.5%
7.2 Storage Temperature: Ambient
7.3 Inert Atmosphere: No requirement
7.4 Venting: Open (flame arrester)
7.5 IMO Pollution Category: B
7.6 Ship Type: 3
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:

Category	Classification
Health Hazard (Blue).....	0
Flammability (Red).....	1
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: 186.33
9.3 Boiling Point at 1 atm: 498°F = 259°C = 532K
9.4 Freezing Point: 75°F = 24°C = 297°K
9.5 Critical Temperature: 762.8°F = 406°C = 679.2°K
9.6 Critical Pressure: 280 psia = 19 atm = 1.9 MN/m²
9.7 Specific Gravity: 0.831 at 24°C (liquid)
9.8 Liquid Surface Tension: 27.4 dynes/cm = 0.0274 N/m at 25°C
9.9 Liquid Water Interfacial Tension: (est.) 30 dynes/cm = 0.03 N/m at 30°C
9.10 Vapor (Gas) Specific Gravity: Not pertinent
9.11 Ratio of Specific Heats of Vapor (Gas): 1.030
9.12 Latent Heat of Vaporization: (est.) 110 Btu/lb = 62 cal/g = 2.6 X 10⁵ J/kg
9.13 Heat of Combustion: (est.) -18,000 Btu/lb = -10,000 cal/g = -420 X 10³ 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
80	51.740	85	0.606	90	1.005	86	1.545
85	51.610	90	0.612	95	1.003	88	1.506
90	51.470	95	0.618	100	1.000	90	1.469
95	51.340	100	0.625	105	0.997	92	1.433
100	51.200	105	0.631	110	0.994	94	1.398
105	51.070	110	0.637	115	0.991	96	1.364
110	50.930	115	0.643	120	0.989	98	1.331
115	50.800	120	0.649	125	0.986	100	1.299
120	50.660	125	0.655	130	0.983	102	1.268
125	50.520	130	0.661	135	0.980	104	1.238
130	50.390	135	0.667	140	0.978	106	1.209
135	50.250	140	0.673	145	0.975	108	1.181
140	50.120	145	0.680	150	0.972	110	1.154
145	49.980	150	0.686	155	0.969	112	1.128
150	49.850			160	0.967	114	1.102
155	49.710			165	0.964	116	1.077
160	49.580			170	0.961	118	1.053
165	49.440			175	0.958	120	1.029
170	49.310			180	0.955		
175	49.170			185	0.953		
180	49.040			190	0.950		
185	48.900			195	0.947		
190	48.770			200	0.944		
195	48.630			205	0.942		
200	48.500						
205	48.360						

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		N	0	0.333
	N		O		O	25	0.347
	S		T		T	50	0.361
	O					75	0.375
	L		P		P	100	0.389
	U		E		E	125	0.403
	B		R		R	150	0.416
	I		T		T	175	0.430
	E		I		I	200	0.443
			N		N	225	0.456
			E		E	250	0.469
			N		N	275	0.482
			T		T	300	0.495
						325	0.507
						350	0.519
						375	0.532
						400	0.544
						425	0.556
						450	0.567
						475	0.579
						500	0.590
						525	0.601
						550	0.613
						575	0.624
						600	0.634