

# 1-DODECENE

DDC

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b> Adacene-12 alpha-Dodecylene	Watery liquid  Colorless  Mild, pleasant odor
Floats on water.	
<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 foam, dry chemical or carbon dioxide.
<b>Exposure</b>	CALL FOR MEDICAL AID.  LIQUID Irritating to skin and eyes. Harmful if swallowed. Remove contaminated clothing and shoes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water. IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk. DO NOT INDUCE VOMITING.
<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.

<b>1. CORRECTIVE RESPONSE ACTIONS</b> Stop discharge Contain Collection Systems: Skim Clean shore line Salvage waterfowl	<b>2. CHEMICAL DESIGNATIONS</b> 2.1 CG Compatibility Group: 30; Olefin 2.2 Formula: CH <sub>2</sub> (CH <sub>2</sub> ) <sub>10</sub> CH=CH <sub>2</sub> 2.3 IMO/UN Designation: Not listed 2.4 DOT ID No.: Not listed 2.5 CAS Registry No.: 6842-15-5 2.6 NAERG Guide No.: Not listed 2.7 Standard Industrial Trade Classification: 51119
<b>3. HEALTH HAZARDS</b>	
<p>3.1 Personal Protective Equipment: Protective gloves; goggles or face shield 3.2 Symptoms Following Exposure: No inhalation hazard expected. Aspiration hazard if ingested. Minor skin and eye irritation. 3.3 Treatment of Exposure: INHALATION: remove victim to fresh air. INGESTION: do NOT induce vomiting! Do NOT lavage! Give vegetable oil and demulcents; call physician. EYE CONTACT: flush with water for 15 min. SKIN CONTACT: wash 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: Currently not available 3.8 Toxicity by Inhalation: Currently not available. 3.9 Chronic Toxicity: Currently not available 3.10 Vapor (Gas) Irritant Characteristics: Slight smarting of eyes and respiratory system at 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 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</p>	

## 4. FIRE HAZARDS

- 4.1 Flash Point: 212°F C.C.
- 4.2 Flammable Limits in Air: Currently not available
- 4.3 Fire Extinguishing Agents: Foam, dry chemical, carbon dioxide
- 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: 491°F
- 4.8 Electrical Hazards: Not pertinent
- 4.9 Burning Rate: 5.8 mm/min.
- 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): 24.0 (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: 93-98% normal alpha olefins
- 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: 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: 168.31
- 9.3 Boiling Point at 1 atm: 415°F = 213°C = 486°K
- 9.4 Freezing Point: -31°F = -35°C = 238°K
- 9.5 Critical Temperature: Not pertinent
- 9.6 Critical Pressure: Not pertinent
- 9.7 Specific Gravity: 0.758 at 20°C (liquid)
- 9.8 Liquid Surface Tension: 25.6 dynes/cm = 0.0256 N/m at 20°C
- 9.9 Liquid Water Interfacial Tension: Currently not available
- 9.10 Vapor (Gas) Specific Gravity: Currently not available
- 9.11 Ratio of Specific Heats of Vapor (Gas): 1.032
- 9.12 Latent Heat of Vaporization: 110 Btu/lb = 61.0 cal/g = 2.55 X 10<sup>5</sup> J/kg
- 9.13 Heat of Combustion: -18,911 Btu/lb = -10,506 cal/g = -439.87 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: 0.01 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
40	48.050	85	0.465	30	0.973	40	1.699
50	47.800	90	0.476	40	0.965	50	1.541
60	47.540	95	0.486	50	0.957	60	1.404
70	47.290	100	0.497	60	0.949	70	1.283
80	47.040	105	0.507	70	0.941	80	1.177
90	46.780	110	0.517	80	0.933	90	1.083
100	46.530	115	0.528	90	0.924	100	0.999
110	46.280	120	0.538	100	0.916	110	0.924
120	46.020	125	0.549	110	0.908	120	0.858
130	45.770	130	0.559	120	0.900	130	0.798
140	45.520	135	0.570	130	0.892	140	0.744
150	45.270	140	0.580	140	0.884	150	0.695
160	45.010	145	0.590	150	0.875	160	0.651
170	44.760	150	0.601	160	0.867	170	0.611
180	44.510			170	0.859	180	0.575
190	44.250			180	0.851	190	0.542
200	44.000			190	0.843	200	0.511
210	43.750			200	0.835	210	0.483

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	70	0.003	70	0.00010	0	0.337
	N	80	0.005	80	0.00014	25	0.352
	S	90	0.007	90	0.00021	50	0.367
	O	100	0.011	100	0.00029	75	0.381
	L	110	0.015	110	0.00042	100	0.396
	U	120	0.021	120	0.00058	125	0.410
	B	130	0.030	130	0.00080	150	0.424
	L	140	0.042	140	0.00109	175	0.438
	E	150	0.057	150	0.00146	200	0.452
		160	0.077	160	0.00196	225	0.465
		170	0.104	170	0.00259	250	0.479
		180	0.138	180	0.00339	275	0.492
		190	0.183	190	0.00441	300	0.505
		200	0.239	200	0.00568	325	0.517
		210	0.310	210	0.00726	350	0.530
		220	0.400	220	0.00922	375	0.542
		230	0.511	230	0.01162	400	0.555
		240	0.649	240	0.01455	425	0.567
		250	0.819	250	0.01809	450	0.579
		260	1.026	260	0.02236	475	0.590
		270	1.279	270	0.02747	500	0.602
		280	1.583	280	0.03356	525	0.613
		290	1.949	290	0.04077	550	0.624
		300	2.387	300	0.04926	575	0.635
						600	0.646