

1-DECENE

DCE

CAUTIONARY RESPONSE INFORMATION

Common Synonyms alpha-Decene	Watery liquid Colorless Pleasant odor Floats on water.
<p>Keep people away. Avoid contact with liquid. Shut off ignition sources and call fire department. Notify local health and pollution control agencies.</p>	
Fire	Combustible. Extinguish with dry chemical, foam, or carbon dioxide.
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 pollution control officials. Notify operators of nearby water intakes.

1. CORRECTIVE RESPONSE ACTIONS

Stop discharge
Contain
Collection Systems: Skim
Chemical and Physical Treatment: Burn;
Absorb
Clean shore line
Salvage waterfowl

2. CHEMICAL DESIGNATIONS

2.1 **CG Compatibility Group:** Currently not available; Olefin
2.2 **Formula:** CH=CH(CH₂)₇CH₃
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:** 51119

3. HEALTH HAZARDS

3.1 **Personal Protective Equipment:** Organic canister or air-supplied mask, goggles or face shield.
3.2 **Symptoms Following Exposure:** Vapors may produce slight irritation of eyes and respiratory tract if present in high concentration. May also act as a slight anesthetic at high concentration.
3.3 **Treatment of Exposure:** CONTACT WITH EYES OR SKIN: splashes in the eye should be removed by thorough flushing with water. Skin areas should be washed with soap and water. Contaminated clothing should be laundered before reuse.
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 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:** 128°F O.C.
4.2 **Flammable Limits in Air:** Not pertinent
4.3 **Fire Extinguishing Agents:** Foam, dry chemical, or 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:** 455°F
4.8 **Electrical Hazards:** Currently not available
4.9 **Burning Rate:** 6.0 mm/min.
4.10 **Adiabatic Flame Temperature:** Currently not available
4.11 **Stoichiometric Air to Fuel Ratio:** 71.4 (calc.)
4.12 **Flame Temperature:** Currently not available
4.13 **Combustion Molar Ratio (Reactant to Product):** 20.0 (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:**
Bioaccumulation: 0
Damage to living resources: 3
Human Oral hazard: 1
Human Contact hazard: 0
Reduction of amenities: 0

7. SHIPPING INFORMATION

7.1 **Grades of Purity:** Technical: 95-99%
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)	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:** 140.2
9.3 **Boiling Point at 1 atm:** 339.1°F = 170.6°C = 443.8°K
9.4 **Freezing Point:** -87.3°F = -66.3°C = 206.9°K
9.5 **Critical Temperature:** Not pertinent
9.6 **Critical Pressure:** Not pertinent
9.7 **Specific Gravity:** 0.741 at 20°C (liquid)
9.8 **Liquid Surface Tension:** 24 dynes/cm = 0.024 N/m at 20°C
9.9 **Liquid Water Interfacial Tension:** 28 dynes/cm = 0.028 N/m at 22.7°C
9.10 **Vapor (Gas) Specific Gravity:** 4.8
9.11 **Ratio of Specific Heats of Vapor (Gas):** 1.039
9.12 **Latent Heat of Vaporization:** 119 Btu/lb = 65.9 cal/g = 2.76 X 10⁵ J/kg
9.13 **Heat of Combustion:** -19,107 Btu/lb = -10,615 cal/g = -444.43 X 10⁵ 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
40	46.980		C	30	0.947	40	0.969
50	46.700		U	40	0.937	50	0.895
60	46.430		R	50	0.928	60	0.829
70	46.160		R	60	0.919	70	0.771
80	45.890		E	70	0.909	80	0.718
90	45.620		N	80	0.900	90	0.671
100	45.350		T	90	0.891	100	0.628
110	45.080		L	100	0.881	110	0.590
120	44.810		Y	110	0.872	120	0.555
130	44.540			120	0.863	130	0.523
140	44.270		N	130	0.853	140	0.494
150	44.000		O	140	0.844	150	0.467
160	43.730		T	150	0.835	160	0.443
170	43.460			160	0.826	170	0.421
180	43.190		A	170	0.816	180	0.400
190	42.920		V	180	0.807	190	0.381
200	42.650		A	190	0.798	200	0.364
210	42.380		I	200	0.788	210	0.348
			L				
			A				
			B				
			L				
			E				

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	0.028	70	0.00068	0	0.335
	N	80	0.039	80	0.00095	10	0.341
	S	90	0.055	90	0.00132	20	0.347
	O	100	0.077	100	0.00180	30	0.353
	L	110	0.106	110	0.00243	40	0.358
	U	120	0.144	120	0.00324	50	0.364
	B	130	0.193	130	0.00429	60	0.370
	L	140	0.258	140	0.00561	70	0.376
	E	150	0.340	150	0.00728	80	0.381
		160	0.445	160	0.00937	90	0.387
		170	0.577	170	0.01196	100	0.393
		180	0.742	180	0.01514	110	0.399
		190	0.946	190	0.01903	120	0.404
		200	1.199	200	0.02374	130	0.410
		210	1.508	210	0.02941	140	0.416
		220	1.884	220	0.03621	150	0.422
		230	2.339	230	0.04430	160	0.427
		240	2.886	240	0.05387	170	0.433
						180	0.439
						190	0.445
						200	0.450
						210	0.456
						220	0.462
						230	0.468
						240	0.473
						250	0.479