

1-TRIDECENE

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CAUTIONARY RESPONSE INFORMATION				4. FIRE HAZARDS	7. SHIPPING INFORMATION
Common Synonyms Undecylethylene	Watery liquid Floats on water.	Colorless	Mild pleasant odor	<p>4.1 Flash Point: 175°F (approx.)</p> <p>4.2 Flammable Limits in Air: Currently not available</p> <p>4.3 Fire Extinguishing Agents: Dry chemical, foam, or carbon dioxide</p> <p>4.4 Fire Extinguishing Agents Not to Be Used: Water may be ineffective.</p> <p>4.5 Special Hazards of Combustion Products: Not pertinent</p> <p>4.6 Behavior in Fire: Not pertinent</p> <p>4.7 Auto Ignition Temperature: Currently not available</p> <p>4.8 Electrical Hazards: Not pertinent</p> <p>4.9 Burning Rate: Currently not available</p> <p>4.10 Adiabatic Flame Temperature: Currently not available</p> <p>4.11 Stoichiometric Air to Fuel Ratio: 92.8 (calc.)</p> <p>4.12 Flame Temperature: Currently not available</p> <p>4.13 Combustion Molar Ratio (Reactant to Product): 26.0 (calc.)</p> <p>4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed</p>	<p>7.1 Grades of Purity: Technical: 95%</p> <p>7.2 Storage Temperature: Ambient</p> <p>7.3 Inert Atmosphere: No requirement</p> <p>7.4 Venting: Open (flame arrester)</p> <p>7.5 IMO Pollution Category: Currently not available</p> <p>7.6 Ship Type: Currently not available</p> <p>7.7 Barge Hull Type: Currently not available</p>
Fire	Combustible. Extinguish with dry chemical, foam, or carbon dioxide. Water may be ineffective on fire. Cool exposed containers with water.				8. HAZARD CLASSIFICATIONS
Exposure	LIQUID Irritating to eyes. IF IN EYES, hold eyelids open and flush with plenty of water.				<p>8.1 49 CFR Category: Not listed</p> <p>8.2 49 CFR Class: Not pertinent</p> <p>8.3 49 CFR Package Group: Not listed</p> <p>8.4 Marine Pollutant: No</p> <p>8.5 NFPA Hazard Classification: Not listed</p> <p>8.6 EPA Reportable Quantity: Not listed</p> <p>8.7 EPA Pollution Category: Not listed</p> <p>8.8 RCRA Waste Number: Not listed</p> <p>8.9 EPA FWPCA List: Not listed</p>
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.				9. PHYSICAL & CHEMICAL PROPERTIES
1. CORRECTIVE RESPONSE ACTIONS	Stop discharge Contain Collection Systems: Skim Chemical and Physical Treatment: Absorb Clean shore line Salvage waterfowl	2. CHEMICAL DESIGNATIONS		5. CHEMICAL REACTIVITY	<p>9.1 Physical State at 15°C and 1 atm: Liquid</p> <p>9.2 Molecular Weight: 182.35</p> <p>9.3 Boiling Point at 1 atm: 451°F = 233°C = 506°K</p> <p>9.4 Freezing Point: -11°F = -24°C = 249°K</p> <p>9.5 Critical Temperature: Not pertinent</p> <p>9.6 Critical Pressure: Not pertinent</p> <p>9.7 Specific Gravity: 0.765 at 20°C (liquid)</p> <p>9.8 Liquid Surface Tension: 24.5 dynes/cm = 0.0245 N/m at 20°C</p> <p>9.9 Liquid Water Interfacial Tension: Currently not available</p> <p>9.10 Vapor (Gas) Specific Gravity: Not pertinent</p> <p>9.11 Ratio of Specific Heats of Vapor (Gas): 1.029</p> <p>9.12 Latent Heat of Vaporization: 110 Btu/lb = 59 cal/g = 2.5 X 10³ J/kg</p> <p>9.13 Heat of Combustion: -19,048 Btu/lb = -10,582 cal/g = -443.05 J/kg</p> <p>9.14 Heat of Decomposition: Not pertinent</p> <p>9.15 Heat of Solution: Not pertinent</p> <p>9.16 Heat of Polymerization: Not pertinent</p> <p>9.17 Heat of Fusion: Currently not available</p> <p>9.18 Limiting Value: Currently not available</p> <p>9.19 Reid Vapor Pressure: Low</p>
3. HEALTH HAZARDS	<p>3.1 Personal Protective Equipment: Goggles or face shield.</p> <p>3.2 Symptoms Following Exposure: Liquid may irritate eyes.</p> <p>3.3 Treatment of Exposure: EYES: flush with water for 15 min.</p> <p>3.4 TLV-TWA: Not listed.</p> <p>3.5 TLV-STEL: Not listed.</p> <p>3.6 TLV-Ceiling: Not listed.</p> <p>3.7 Toxicity by Ingestion: Currently not available</p> <p>3.8 Toxicity by Inhalation: Currently not available.</p> <p>3.9 Chronic Toxicity: Currently not available</p> <p>3.10 Vapor (Gas) Irritant Characteristics: Non-volatile</p> <p>3.11 Liquid or Solid Characteristics: Currently not available</p> <p>3.12 Odor Threshold: Currently not available</p> <p>3.13 IDLH Value: Not listed.</p> <p>3.14 OSHA PEL-TWA: Not listed.</p> <p>3.15 OSHA PEL-STEL: Not listed.</p> <p>3.16 OSHA PEL-Ceiling: Not listed.</p> <p>3.17 EPA AEGL: Not listed</p>			6. WATER POLLUTION	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
35	48.620	35	0.499	32	1.040	15	3.203
40	48.500	40	0.499	34	1.040	20	2.988
45	48.370	45	0.499	36	1.040	25	2.791
50	48.250	50	0.499	38	1.040	30	2.611
55	48.130	55	0.499	40	1.040	35	2.446
60	48.010	60	0.499	42	1.040	40	2.294
65	47.890	65	0.499	44	1.040	45	2.154
70	47.770	70	0.499	46	1.040	50	2.026
75	47.650	75	0.499	48	1.040	55	1.907
80	47.520	80	0.499	50	1.040	60	1.797
85	47.400	85	0.499	52	1.040	65	1.696
90	47.280	90	0.499	54	1.040	70	1.602
95	47.160	95	0.499	56	1.040	75	1.515
100	47.040	100	0.499	58	1.040	80	1.434
		105	0.499	60	1.040	85	1.359
		110	0.499	62	1.040		
		115	0.499	64	1.040		
		120	0.499	66	1.040		
				68	1.040		
				70	1.040		
				72	1.040		
				74	1.040		
				76	1.040		
				78	1.040		
				80	1.040		

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	130	0.009	130	0.00027	0	0.347	
N	140	0.014	140	0.00040	25	0.360	
S	150	0.020	150	0.00057	50	0.374	
O	160	0.029	160	0.00080	75	0.387	
L	170	0.042	170	0.00112	100	0.401	
U	180	0.058	180	0.00154	125	0.414	
B	190	0.079	190	0.00208	150	0.428	
L	200	0.108	200	0.00277	175	0.441	
E	210	0.144	210	0.00366	200	0.454	
	220	0.191	220	0.00477	225	0.467	
	230	0.250	230	0.00615	250	0.480	
	240	0.324	240	0.00786	275	0.493	
	250	0.415	250	0.00994	300	0.505	
	260	0.528	260	0.01246	325	0.518	
	270	0.665	270	0.01548	350	0.531	
	280	0.831	280	0.01909	375	0.543	
	290	1.031	290	0.02336	400	0.556	
	300	1.269	300	0.02837	425	0.568	
					450	0.580	
					475	0.592	
					500	0.605	
					525	0.617	
					550	0.628	
					575	0.640	
					600	0.652	