

2-ETHYL HEXANOL

EHX

CAUTIONARY RESPONSE INFORMATION

Common Synonyms 2-Ethyl-1-hexanol 2-Ethylhexyl alcohol		Oily liquid	Colorless	Faint odor
		Floats on water.		
<p>Call fire department. Avoid contact with liquid. Notify local health and pollution control agencies. Protect water intakes.</p>				
Fire	Combustible. Extinguish with dry chemical, alcohol foam, or carbon dioxide. Cool exposed containers with water.			
Exposure	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.			
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:
 Absorb
 Clean shore line
 Salvage waterfowl

2. CHEMICAL DESIGNATIONS

2.1 **CG Compatibility Group:** 20; Alcohol, glycol
 2.2 **Formula:** CH₃(CH₂)₅CH(C₂H₅)CH₂OH
 2.3 **IMO/UN Designation:** Not listed
 2.4 **DOT ID No.:** Not listed
 2.5 **CAS Registry No.:** 140-76-7
 2.6 **NAERG Guide No.:** Not listed
 2.7 **Standard Industrial Trade Classification:** 51219

3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Air pack or organic canister; goggles; rubber gloves.
 3.2 **Symptoms Following Exposure:** Anesthesia, nausea, headache, dizziness; mildly irritating to skin and eyes.
 3.3 **Treatment of Exposure:** INHALATION: move victim to fresh air. SKIN: wash affected areas with water. EYES: flush with water for 15 min. Get medical care.
 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; LD₅₀ = 0.5 to 5 g/kg (lab animals)
 3.8 **Toxicity by Inhalation:** Currently not available.
 3.9 **Chronic Toxicity:** Increased excitability of central nervous system in rats and rabbits.
 3.10 **Vapor (Gas) Irritant Characteristics:** Vapors cause a slight smarting of the eyes or 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 AEG:** Not listed

4. FIRE HAZARDS

- 4.1 **Flash Point:** 185°F O.C. 175°F C.C.
 4.2 **Flammable Limits in Air:** Currently not available
 4.3 **Fire Extinguishing Agents:** Foam, carbon dioxide, 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:** 581°F
 4.8 **Electrical Hazards:** Not pertinent
 4.9 **Burning Rate:** 4.0 mm/min.
 4.10 **Adiabatic Flame Temperature:** Currently not available
 4.11 **Stoichiometric Air to Fuel Ratio:** 57.1 (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):** 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:** 19 ppm/24 hr/brine shrimp/TL_m
 6.2 **Waterfowl Toxicity:** Currently not available
 6.3 **Biological Oxygen Demand (BOD):** 88% of theoretical in 5 days
 6.4 **Food Chain Concentration Potential:** None
 6.5 **GESAMP Hazard Profile:**
 Bioaccumulation: 0
 Damage to living resources: 2
 Human Oral hazard: 1
 Human Contact hazard: 0
 Reduction of amenities: X

7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** 99-99.7%
 7.2 **Storage Temperature:** Ambient
 7.3 **Inert Atmosphere:** No requirement
 7.4 **Venting:** Open (flame arrester)
 7.5 **IMO Pollution Category:** C
 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)..... | 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:** 130.23
 9.3 **Boiling Point at 1 atm:** 364.5°F = 184.7°C = 457.9°K
 9.4 **Freezing Point:** <158°F = <70°C = <343°K
 9.5 **Critical Temperature:** 710.6°F = 377°C = 650.2°K
 9.6 **Critical Pressure:** 512 psia = 34.8 atm = 3.53 MN/m²
 9.7 **Specific Gravity:** 0.834 at 20°C (liquid)
 9.8 **Liquid Surface Tension:** 27.6 dynes/cm = 0.0276 N/m at 20°C
 9.9 **Liquid Water Interfacial Tension:** 22 dynes/cm = 0.022 N/m at 22.7°C
 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:** 167 Btu/lb = 92.8 cal/g = 3.89 X 10⁵ J/kg
 9.13 **Heat of Combustion:** -17,480 Btu/lb = -9710 cal/g = 406.5 X 10⁶ 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
35	52.970	35	0.514	34	0.927	52	14.180
40	52.830	40	0.521	36	0.927	54	13.530
45	52.690	45	0.527	38	0.927	56	12.920
50	52.550	50	0.534	40	0.927	58	12.330
55	52.410	55	0.541	42	0.927	60	11.780
60	52.260	60	0.547	44	0.927	62	11.260
65	52.120	65	0.554	46	0.927	64	10.760
70	51.980	70	0.561	48	0.927	66	10.290
75	51.840	75	0.567	50	0.927	68	9.843
80	51.690	80	0.574	52	0.927	70	9.418
85	51.550	85	0.581	54	0.927	72	9.015
90	51.410	90	0.587	56	0.927	74	8.632
95	51.270	95	0.594	58	0.927	76	8.268
100	51.130	100	0.601	60	0.927	78	7.922
105	50.980	105	0.607	62	0.927	80	7.592
110	50.840	110	0.614	64	0.927	82	7.279
115	50.700	115	0.621	66	0.927	84	6.980
120	50.560	120	0.627	68	0.927	86	6.696
125	50.410	125	0.634	70	0.927		
130	50.270	130	0.641	72	0.927		
135	50.130	135	0.647	74	0.927		
140	49.990	140	0.654	76	0.927		
145	49.850	145	0.661	78	0.927		
150	49.700	150	0.667	80	0.927		
155	49.560	155	0.674	82	0.927		
160	49.420			84	0.927		

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
68	0.070	60	0.002	60	0.00006		N
		70	0.004	70	0.00009		O
		80	0.006	80	0.00013		T
		90	0.009	90	0.00020		
		100	0.014	100	0.00030		P
		110	0.020	110	0.00044		E
		120	0.030	120	0.00063		R
		130	0.043	130	0.00089		T
		140	0.062	140	0.00125		I
		150	0.088	150	0.00174		N
		160	0.122	160	0.00240		E
		170	0.169	170	0.00326		N
		180	0.232	180	0.00439		T
		190	0.314	190	0.00586		
		200	0.422	200	0.00775		
		210	0.561	210	0.01017		
		220	0.741	220	0.01322		
		230	0.970	230	0.01707		
		240	1.261	240	0.02186		
		250	1.626	250	0.02780		
		260	2.083	260	0.03511		
		270	2.649	270	0.04405		
		280	3.348	280	0.05492		
		290	4.205	290	0.06806		
		300	5.250	300	0.08385		