

ETHOXYDIHYDROPYRAN

EHP

CAUTIONARY RESPONSE INFORMATION

Common Synonyms 2-Ethoxy-3,4-dihydro-2H-pyran		Liquid	Colorless
		Floats on water.	
<p>Keep people away. Shut off ignition sources. Call fire department. Avoid contact with liquid. Notify local health and pollution control agencies. Protect water intakes.</p>			
Fire	Combustible. Extinguish with dry chemicals, foam or carbon dioxide. Water may be ineffective on fire.		
Exposure	Call for medical aid. Exposure data not available.		
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.		

<p>1. CORRECTIVE RESPONSE ACTIONS</p> Stop discharge Contain Collection Systems: Skim Chemical and Physical Treatment: Burn; Absorb Clean shore line Salvage waterfowl	<p>2. CHEMICAL DESIGNATIONS</p> 2.1 CG Compatibility Group: Not listed. 2.2 Formula: OCH = CHCH ₂ CH ₂ CHOC ₂ H ₅ 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: 51616
<p>3. HEALTH HAZARDS</p> 3.1 Personal Protective Equipment: Goggles or face shield; rubber gloves. 3.2 Symptoms Following Exposure: Contact with liquid irritates eyes. Also irritates skin on prolonged contact. 3.3 Treatment of Exposure: EYES: flush with water for at least 15 min. SKIN: wipe off; wash well with soap and water. INGESTION: induce vomiting; get medical attention. 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: Currently not available 3.11 Liquid or Solid Characteristics: Currently not available 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: 98°F O.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: Water may be ineffective.
4.5 Special Hazards of Combustion Products: Not pertinent
4.6 Behavior in Fire: Not pertinent
4.7 Auto Ignition Temperature: Currently not available
4.8 Electrical Hazards: Currently not available
4.9 Burning Rate: 4.8 mm/min.
4.10 Adiabatic Flame Temperature: Currently not available
4.11 Stoichiometric Air to Fuel Ratio: 42.8 (calc.)
4.12 Flame Temperature: Currently not available
4.13 Combustion Molar Ratio (Reactant to Product): 13.0 (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: Commercial
7.2 Storage Temperature: Ambient
7.3 Inert Atmosphere: No requirement
7.4 Venting: Open (flame arrester)
7.5 IMO Pollution Category: Currently not available
7.6 Ship Type: Currently not available
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).....	1

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: 128.17
9.3 Boiling Point at 1 atm: 289°F = 143°C = 416°K
9.4 Freezing Point: -148°F = -100°C = 173°K
9.5 Critical Temperature: Not pertinent
9.6 Critical Pressure: Not pertinent
9.7 Specific Gravity: 0.875 at 20°C (liquid)
9.8 Liquid Surface Tension: (est.) 25 dynes/cm = 0.025 N/m at 20°C
9.9 Liquid Water Interfacial Tension: (est.) 30 dynes/cm = 0.030 N/m at 20°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: (est.) 120 Btu/lb = 69 cal/g = 2.9 X 10⁵ J/kg
9.13 Heat of Combustion: (est.) -14,000 Btu/lb = -7,900 cal/g = -330 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
34	55.800	34	0.441	51	1.048	51	9.018
36	55.730	36	0.442	52	1.048	52	8.773
38	55.660	38	0.443	53	1.048	53	8.535
40	55.590	40	0.444	54	1.048	54	8.305
42	55.520	42	0.446	55	1.048	55	8.082
44	55.450	44	0.447	56	1.048	56	7.865
46	55.380	46	0.448	57	1.048	57	7.656
48	55.310	48	0.449	58	1.048	58	7.452
50	55.240	50	0.450	59	1.048	59	7.255
52	55.170	52	0.451	60	1.048	60	7.064
54	55.100	54	0.452	61	1.048	61	6.879
56	55.040	56	0.453	62	1.048	62	6.699
58	54.970	58	0.454	63	1.048	63	6.524
60	54.900	60	0.456	64	1.048	64	6.355
62	54.830	62	0.457	65	1.048	65	6.190
64	54.760	64	0.458	66	1.048	66	6.031
66	54.690	66	0.459	67	1.048	67	5.876
68	54.620	68	0.460	68	1.048	68	5.726
70	54.550	70	0.461			69	5.580
72	54.480	72	0.462			70	5.438
74	54.410	74	0.463			71	5.301
76	54.340	76	0.464			72	5.167
78	54.270	78	0.466			73	5.037
80	54.200	80	0.467			74	4.911
82	54.130	82	0.468			75	4.789
84	54.060	84	0.469			76	4.670

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	0.010	580	0.000	580	286.09998		N
		590	0.000	590	340.19998		O
		600	0.000	600	403.19998		T
		610	0.000	610	476.29999		
		620	0.000	620	560.79999		P
		630	0.000	630	658.29999		E
		640	0.000	640	770.50000		R
		650	0.000	650	899.09998		T
		660	0.000	660	1046.00000		I
		670	0.000	670	1214.00000		N
		680	0.000	680	1405.00000		E
		690	0.000	690	1622.00000		N
		700	0.000	700	1867.00000		T
		710	0.000	710	2145.00000		
		720	0.000	720	2457.00000		
		730	0.000	730	2809.00000		
		740	0.000	740	3203.00000		
		750	0.000	750	3645.00000		
		760	0.000	760	4138.00000		
		770	0.000	770	4688.00000		
		780	0.000	780	5300.00000		