

# GLYCIDYL METHACRYLATE

GCM

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b> Glycidyl alpha-methyl acrylate Methacrylic acid, 2, 3-epoxypropyl ester		Liquid	Colorless	Fruity odor
		Floats on water.		
<p>Keep people away. Avoid contact with liquid.                  Wear rubber overclothing (including gloves).                  Call fire department.                  Notify local health and pollution control agencies.                  Protect water intakes.</p>				
<b>Fire</b>	Combustible. Wear goggles, self-contained breathing apparatus, and rubber overclothing (including gloves). Extinguish with foam, dry chemical, or carbon dioxide. Water may be ineffective on fire.			
<b>Exposure</b>	CALL FOR MEDICAL AID.  LIQUID Will burn 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.			
<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: Pump Clean shore line	<b>2. CHEMICAL DESIGNATIONS</b> 2.1 <b>CG Compatibility Group:</b> Not listed. 2.2 <b>Formula:</b> CH <sub>2</sub> =CH(CH <sub>2</sub> )COOCH <sub>2</sub> CHCH <sub>2</sub> O 2.3 <b>IMO/UN Designation:</b> Not listed 2.4 <b>DOT ID No.:</b> Not listed 2.5 <b>CAS Registry No.:</b> 106-91-2 2.6 <b>NAERG Guide No.:</b> Not listed 2.7 <b>Standard Industrial Trade Classification:</b> 51373
<b>3. HEALTH HAZARDS</b>	
3.1 <b>Personal Protective Equipment:</b> Polyethylene-coated apron and gloves and close-fitting goggles. 3.2 <b>Symptoms Following Exposure:</b> The liquid irritates eyes about as much as soap. Prolonged contact with skin produces irritation and dermatitis. 3.3 <b>Treatment of Exposure:</b> SKIN: wash thoroughly with soap and water and treat as a chemical burn. EYES: irrigate with clear water for 15 min. and get medical attention. 3.4 <b>TLV-TWA:</b> Not listed. 3.5 <b>TLV-STEL:</b> Not listed. 3.6 <b>TLV-Ceiling:</b> Not listed. 3.7 <b>Toxicity by Ingestion:</b> Grade 2; LD <sub>50</sub> = 0.5 to 5 g/kg (rat) 3.8 <b>Toxicity by Inhalation:</b> Currently not available. 3.9 <b>Chronic Toxicity:</b> Currently not available 3.10 <b>Vapor (Gas) Irritant Characteristics:</b> Vapor is moderately irritating such that personnel will not usually tolerate moderate or high vapor concentrations. 3.11 <b>Liquid or Solid Characteristics:</b> Causes smarting of the skin and first-degree burns on short exposure; may cause secondary burns on long exposure. In eyes the irritation is similar to that caused by ordinary soap. 3.12 <b>Odor Threshold:</b> Currently not available 3.13 <b>IDLH Value:</b> Not listed. 3.14 <b>OSHA PEL-TWA:</b> Not listed. 3.15 <b>OSHA PEL-STEL:</b> Not listed. 3.16 <b>OSHA PEL-Ceiling:</b> Not listed. 3.17 <b>EPA AEGL:</b> Not listed	

## 4. FIRE HAZARDS

- 4.1 **Flash Point:** 183°F O.C.  
 4.2 **Flammable Limits in Air:** Currently not available  
 4.3 **Fire Extinguishing Agents:** Currently not available  
 4.4 **Fire Extinguishing Agents Not to Be Used:** Currently not available  
 4.5 **Special Hazards of Combustion Products:** Irritating vapors are generated when heated  
 4.6 **Behavior in Fire:** Not pertinent  
 4.7 **Auto Ignition Temperature:** Currently not available  
 4.8 **Electrical Hazards:** Not pertinent  
 4.9 **Burning Rate:** Currently not available  
 4.10 **Adiabatic Flame Temperature:** Currently not available  
 4.11 **Stoichiometric Air to Fuel Ratio:** 39.3 (calc.)  
 4.12 **Flame Temperature:** Currently not available  
 4.13 **Combustion Molar Ratio (Reactant to Product):** 12.5 (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:** Heat, peroxides, and caustics all cause polymerization; the reaction is not considered hazardous.  
 5.6 **Inhibitor of Polymerization:** Hydroquinone monomethyl ether: 50 ppm

## 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:** Technical: 92%  
 7.2 **Storage Temperature:** Ambient  
 7.3 **Inert Atmosphere:** No requirement 10.4 Open (flame arrester)  
 7.4 **Venting:** Currently not available  
 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:** 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:** 142.2  
 9.3 **Boiling Point at 1 atm:** Very high  
 9.4 **Freezing Point:** Currently not available  
 9.5 **Critical Temperature:** Not pertinent  
 9.6 **Critical Pressure:** Not pertinent  
 9.7 **Specific Gravity:** 1.073 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.) 40 dynes/cm = 0.04 N/m at 20°C  
 9.10 **Vapor (Gas) Specific Gravity:** Not pertinent  
 9.11 **Ratio of Specific Heats of Vapor (Gas):** (est.) 1.043  
 9.12 **Latent Heat of Vaporization:** Not pertinent  
 9.13 **Heat of Combustion:** (est.) -10,800 Btu/lb = -5,980 cal/g = -250 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:** (est.) -900 Btu/lb = -500 cal/g = -20 X 10<sup>5</sup> J/kg  
 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
50	66.980	85	0.426	50	1.040	50	9.343
52	66.980	90	0.430	52	1.040	52	8.841
54	66.980	95	0.434	54	1.040	54	8.370
56	66.980	100	0.438	56	1.040	56	7.927
58	66.980	105	0.442	58	1.040	58	7.511
60	66.980	110	0.446	60	1.040	60	7.119
62	66.980	115	0.451	62	1.040	62	6.751
64	66.980	120	0.455	64	1.040	64	6.404
66	66.980	125	0.459	66	1.040	66	6.078
68	66.980	130	0.463	68	1.040	68	5.770
70	66.980	135	0.467	70	1.040	70	5.481
72	66.980	140	0.471	72	1.040	72	5.207
74	66.980	145	0.476	74	1.040	74	4.950
76	66.980	150	0.480	76	1.040	76	4.707
78	66.980			78	1.040	78	4.477
80	66.980			80	1.040	80	4.260
82	66.980			82	1.040	82	4.056
84	66.980			84	1.040	84	3.862

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		C		N	90	0.336
	N		U		O	100	0.336
	S		R		T	110	0.336
	O		R			120	0.336
	L		E		P	130	0.336
	U		N		E	140	0.336
	B		T		R	150	0.336
	L		L		T	160	0.336
	E		Y		I	170	0.336
					N	180	0.336
			N		E	190	0.336
			O		N	200	0.336
			T		T	210	0.336
						220	0.336
			A			230	0.336
			V			240	0.336
			A			250	0.336
			I			260	0.336
			L				
			A				
			B				
			L				
			E				