

# METHYLETHYLPYRIDINE

MEP

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b> Aldehyde-collidine Aldehydine 5-Ethyl-2-methyl pyridine 5-Ethyl-2-picoline MEP		Liquid	Colorless	Sharp odor
		Floats on water.		
<p>Keep people away. Avoid contact with liquid. Wear goggles, self-contained breathing apparatus, and rubber overclothing (including gloves). Call fire department. Notify local health and pollution control agencies.</p>				
<b>Fire</b>	Combustible. Wear goggles, self-contained breathing apparatus, and rubber overclothing (including gloves). Extinguish with water, dry chemical, alcohol foam, or carbon dioxide. Cool exposed containers with water.			
<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.			

<p><b>1. CORRECTIVE RESPONSE ACTIONS</b> Stop discharge Contain Collection Systems: Skim Chemical and Physical Treatment: Absorb Clean shore line Salvage waterfowl</p>	<p><b>2. CHEMICAL DESIGNATIONS</b> 2.1 <b>CG Compatibility Group:</b> 9; Aromatic amine 2.2 <b>Formula:</b> C<sub>8</sub>H<sub>9</sub>N 2.3 <b>IMO/UN Designation:</b> Not listed 2.4 <b>DOT ID No.:</b> 2300 2.5 <b>CAS Registry No.:</b> 104-90-5 2.6 <b>NAERG Guide No.:</b> 153 2.7 <b>Standard Industrial Trade Classification:</b> 51577</p>
<p><b>3. HEALTH HAZARDS</b></p> <p>3.1 <b>Personal Protective Equipment:</b> Air-supplied mask for high vapor concentrations; plastic gloves; goggles or face shield.</p> <p>3.2 <b>Symptoms Following Exposure:</b> Breathing of vapors will cause vomiting and chest discomfort. Contact with liquid causes skin and eye burns.</p> <p>3.3 <b>Treatment of Exposure:</b> INHALATION: remove victim to fresh air; give oxygen if breathing is difficult; call a physician. SKIN OR EYES: immediately flush with plenty of water for at least 15 min.; get medical care for eyes.</p> <p>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> Vapors cause moderate irritation such that personnel will find high concentrations unpleasant. The effect is temporary. 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. 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</p>	

## 4. FIRE HAZARDS

- 4.1 **Flash Point:** 155°F O.C.  
4.2 **Flammable Limits in Air:** 1.1%-6.6%  
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:** Irritating vapors are generated when heated  
4.6 **Behavior in Fire:** Not pertinent  
4.7 **Auto Ignition Temperature:** 939°F  
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:** 55.9 (calc.)  
4.12 **Flame Temperature:** Currently not available  
4.13 **Combustion Molar Ratio (Reactant to Product):** 14.5 (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:** Flush with water, neutralize with dilute acetic acid  
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):** (theor.): 4.4%, 5 days; 56.6%, 20 days; 0.12-2.14 lb/lb, 5 days  
6.4 **Food Chain Concentration Potential:** None  
6.5 **GESAMP Hazard Profile:** Not listed

## 7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** 99.9%  
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:** 3

## 8. HAZARD CLASSIFICATIONS

- 8.1 **49 CFR Category:** Keep Away From Food  
8.2 **49 CFR Class:** 6.1  
8.3 **49 CFR Package Group:** III  
8.4 **Marine Pollutant:** Yes  
8.5 **NFPA Hazard Classification:**
- |                           |                |
|---------------------------|----------------|
| Category                  | Classification |
| Health Hazard (Blue)..... | 3              |
| Flammability (Red).....   | 2              |
| Instability (Yellow)..... | 0              |
| Special (White).....      |                |
- 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:** 121.18  
9.3 **Boiling Point at 1 atm:** 352°F = 178°C = 451°K  
9.4 **Freezing Point:** -94.5°F = -70.3°C = 202.9°K  
9.5 **Critical Temperature:** Not pertinent  
9.6 **Critical Pressure:** Not pertinent  
9.7 **Specific Gravity:** 0.922 at 20°C (liquid)  
9.8 **Liquid Surface Tension:** 36 dynes/cm = 0.036 N/m at 20°C  
9.9 **Liquid Water Interfacial Tension:** Currently not available  
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:** Currently not available  
9.13 **Heat of Combustion:** Currently not available  
9.14 **Heat of Decomposition:** Not pertinent  
9.15 **Heat of Solution:** Currently not available  
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:** 0.1 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
52	58.110	85	0.435	50	1.040	50	2.520
54	58.040	90	0.438	52	1.040	52	2.448
56	57.970	95	0.441	54	1.040	54	2.379
58	57.900	100	0.444	56	1.040	56	2.312
60	57.830	105	0.446	58	1.040	58	2.247
62	57.760	110	0.449	60	1.040	60	2.185
64	57.690	115	0.452	62	1.040	62	2.125
66	57.620	120	0.455	64	1.040	64	2.067
68	57.550	125	0.458	66	1.040	66	2.011
70	57.480	130	0.460	68	1.040	68	1.957
72	57.420	135	0.463	70	1.040	70	1.905
74	57.350	140	0.466	72	1.040	72	1.854
76	57.280	145	0.469	74	1.040	74	1.806
78	57.210	150	0.471	76	1.040	76	1.758
80	57.140			78	1.040	78	1.713
82	57.070			80	1.040	80	1.669
84	57.000			82	1.040	82	1.626
86	56.930			84	1.040	84	1.585
				86	1.040	86	1.545
				88	1.040	88	1.506
				90	1.040	90	1.469
				92	1.040	92	1.433
				94	1.040	94	1.398
				96	1.040	96	1.364
				98	1.040	98	1.331
				100	1.040	100	1.299

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	1.200	90	0.078	90	0.00161		N
		100	0.105	100	0.00211		O
		110	0.138	110	0.00274		T
		120	0.181	120	0.00353		
		130	0.235	130	0.00450		P
		140	0.303	140	0.00570		E
		150	0.386	150	0.00715		R
		160	0.489	160	0.00890		T
		170	0.614	170	0.01101		I
		180	0.766	180	0.01352		N
		190	0.950	190	0.01650		E
		200	1.169	200	0.02001		N
		210	1.430	210	0.02411		T
		220	1.740	220	0.02890		
		230	2.104	230	0.03444		
		240	2.531	240	0.04083		
		250	3.028	250	0.04817		
		260	3.606	260	0.05656		
		270	4.272	270	0.06510		
		280	5.039	280	0.07591		
		290	5.918	290	0.08911		
		300	6.920	300	0.10280		
		310	8.060	310	0.11820		
		320	9.350	320	0.13540		
		330	10.810	330	0.15450		
		340	12.440	340	0.17570		