

SEC-AMYL ACETATE

AAS

CAUTIONARY RESPONSE INFORMATION

Common Synonyms		Watery liquid	Colorless to yellow	Banana odor
Banana oil Pear oil 2-Pentylacetate		Floats on water. Flammable, irritating vapor is produced.		
<p style="color: red;">Shut off ignition sources and call fire department. Stop discharge if possible. Keep people away. Avoid contact with liquid and vapor; avoid inhalation. Stay upwind and use water spray to "knock down" vapor. Isolate and remove discharged material. Notify local health and pollution control agencies. Protect water intakes.</p>				
Fire	<p>FLAMMABLE. Flashback along vapor trail may occur. Vapor may explode if ignited in an enclosed area. Wear goggles and self-contained breathing apparatus. Extinguish with dry chemical, alcohol foam, or carbon dioxide. Water may be ineffective on fire. Cool exposed containers with water.</p>			
Exposure	<p>CALL FOR MEDICAL AID.</p> <p>VAPOR Irritating to eyes, nose and throat. If inhaled, will cause nausea, headache or dizziness. Move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.</p> <p>LIQUID Irritating to skin and eyes. Remove contaminated clothing and shoes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water.</p>			
Water Pollution	<p>HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS. Fouling to shoreline. May be dangerous if it enters water intakes. Notify local health and pollution control officials. Notify operators of nearby water intakes.</p>			

1. CORRECTIVE RESPONSE ACTIONS

Stop discharge
 Contain
 Collection Systems: Skim
 Chemical and Physical Treatment: Burn

2. CHEMICAL DESIGNATIONS

2.1 **CG Compatibility Group:** 34; Ester
 2.2 **Formula:** CH₃COOCH(CH₂)₄CH₃:H₂
 2.3 **IMO/UN Designation:** 3.3/1104
 2.4 **DOT ID No.:** 1104
 2.5 **CAS Registry No.:** 626-38-0
 2.6 **NAERG Guide No.:** 129
 2.7 **Standard Industrial Trade Classification:** 51372

3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Rubber gloves, chemical goggles or face shield, and lab coat. Organic vapor chemical cartridge respirator for less than 1000 ppm; self-contained breathing apparatus for greater than 1000 ppm.
- 3.2 **Symptoms Following Exposure:** INHALATION AND INGESTION: Irritates the mucous membrane, depresses the central nervous system, and is a narcotic. Damage to kidney, liver, and lung can occur. Ingestion may irritate gastro-intestinal tract. EYES: Irritation. Skin: Irritation.
- 3.3 **Treatment of Exposure:** Call a physician. INHALATION: Remove from exposure, administer oxygen if needed. EYES: Flush with water for at least 15 min. SKIN: Remove contaminated clothing and shoes. Wash with soap and water. Subsequent treatment is symptomatic and supportive in nature.
- 3.4 **TLV-TWA:** 125 ppm.
 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:** None
 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:** If spilled on clothing and allowed to remain, may cause smarting and reddening of the skin.
 3.12 **Odor Threshold:** 0.08 ppm
 3.13 **IDLH Value:** 1,000 ppm
 3.14 **OSHA PEL-TWA:** 125 ppm
 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:** 89°F C.C.
 4.2 **Flammable Limits in Air:** 1.00%-7.50%
 4.3 **Fire Extinguishing Agents:** Water fog in conjunction with alcohol foam, dry chemical or carbon dioxide.
 4.4 **Fire Extinguishing Agents Not to Be Used:** Water may be ineffective.
 4.5 **Special Hazards of Combustion Products:** When heated emits acrid fumes.
 4.6 **Behavior in Fire:** When exposed to flames can react vigorously with oxidizing material.
 4.7 **Auto Ignition Temperature:** 680°F-714°F.
 4.8 **Electrical Hazards:** Currently not available
 4.9 **Burning Rate:** Currently not available
 4.10 **Adiabatic Flame Temperature:** Currently not available
 4.11 **Stoichiometric Air to Fuel Ratio:** Currently not available
 4.12 **Flame Temperature:** Currently not available
 4.13 **Combustion Molar Ratio (Reactant to Product):** Currently not available
 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:** Not pertinent
 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:**
 65 ppm/96 hr/Mosquito fish/TL₅₀/turbid water (mixed isomers)
 53 ppm/24 hr/brine shrimp/TL₅₀
- 6.2 **Waterfowl Toxicity:** Currently not available
- 6.3 **Biological Oxygen Demand (BOD):** 53%, 5 days/70%, 15 days 62%, 10 days/80%, 20 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: 1
 Reduction of amenities: X

7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** Currently not available
 7.2 **Storage Temperature:** Ambient
 7.3 **Inert Atmosphere:** Currently not available
 7.4 **Venting:** Currently not available
 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:** Flammable liquid
 8.2 **49 CFR Class:** 3
 8.3 **49 CFR Package Group:** III
 8.4 **Marine Pollutant:** No
 8.5 **NFPA Hazard Classification:**
- | | |
|---------------------------|----------------|
| Category | Classification |
| Health Hazard (Blue)..... | 1 |
| Flammability (Red)..... | 3 |
| 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:** Yes

9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 **Physical State at 15° C and 1 atm:** Liquid
 9.2 **Molecular Weight:** 130.18
 9.3 **Boiling Point at 1 atm:** 271.4°F = 133°C = 406.2°K
 9.4 **Freezing Point:** -95.44°F = -70.8°C = 202.4°K
 9.5 **Critical Temperature:** 619.0°F = 326.1°C = 599.3°K
 9.6 **Critical Pressure:** 411.6 psia = 28.0 atm = 2.83 MN/m²
 9.7 **Specific Gravity:** 0.861-0.866 at 20°C
 9.8 **Liquid Surface Tension:** 28.9 dynes/cm = 0.0289 N/m at 20°C
 9.9 **Liquid Water Interfacial Tension:** (est.) 44.1 dynes/cm = 0.0441 N/m at 20°C
 9.10 **Vapor (Gas) Specific Gravity:** 4.5
 9.11 **Ratio of Specific Heats of Vapor (Gas):** (est.) > 1 - 1.1 at 20°C (68°F)
 9.12 **Latent Heat of Vaporization:** (est.) 128.9 Btu/lb = 71.7 cal/g = 3.0 X 10⁵ J/kg
 9.13 **Heat of Combustion:** -14,402 Btu/lb = -8000 cal/g = -334.9 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
625	18.647	68	0.702	68	7.188	619	0.028
650	17.026						
675	15.405						
700	13.784						
725	12.163						
750	10.542						
775	8.922						
800	7.301						
825	5.680						
850	4.059						
875	2.438						
900	0.817						
925	0.804						
950	0.000						
975	0.000						
1000	0.000						
1025	0.000						
1050	0.000						
1075	10.529						
1100	8.150						
1125	7.771						
1150	5.392						
1175	3.013						
1200	2.633						
1225	20.254						
1250	19.875						

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
	S	20	0.000	15	0.00062	68	34.580
	L	40	0.000	20	0.00072		
	I	60	0.719	25	0.00084		
	G	80	0.279	30	0.00098		
	H	100	1.277	35	0.00115		
	T	120	2.276	40	0.00134		
	L	140	3.274	45	0.00156		
	Y	160	4.272	50	0.00183		
		180	5.270	55	0.00213		
	S	200	6.269	60	0.00249		
	O	220	7.267	65	0.00291		
	L	240	8.265	70	0.00340		
	U	260	9.264	75	0.00397		
	B			80	0.00464		
	L			85	0.00541		
	E			90	0.00632		
				95	0.00738		
				100	0.00862		
				105	0.01007		
				110	0.01176		
				115	0.01374		
				120	0.01605		