

# ISOAMYLACETATE

IAT

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b>		Oily liquid	Colorless	Banana odor
Banana oil Isoamyl ethanoate Isopentyl acetate Pear oil		Floats and mixes with water. Flammable, irritating vapor is produced		
<p><b>Keep people away.</b>  <b>Shut off ignition sources and call fire department.</b>  <b>Avoid contact with liquid and vapor.</b>  <b>Stay upwind and use water spray to "knock down" vapor.</b>  <b>Notify local health and pollution control agencies.</b></p>				
<b>Fire</b>	<p><b>FLAMMABLE.</b>                  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>			
<b>Exposure</b>	<p><b>CALL FOR MEDICAL AID.</b></p> <p><b>VAPOR</b>                  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><b>LIQUID</b>                  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.</p>			
<b>Water Pollution</b>	<p><b>HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS.</b>                  Fouling to shoreline.                  May be dangerous if it enters water intakes.                  Notify local health and pollution control official.                  Notify operators of nearby water intakes.</p>			

### 1. CORRECTIVE RESPONSE ACTIONS

Dilute and disperse  
 Stop discharge  
 Contain  
 Collection Systems: Skim

### 2. CHEMICAL DESIGNATIONS

2.1 **CG Compatibility Group:** 34; Ester  
 2.2 **Formula:** CH<sub>3</sub>COOCH<sub>2</sub>CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>  
 2.3 **IMO/UN Designation:** 3.3/1104  
 2.4 **DOT ID No.:** 1104  
 2.5 **CAS Registry No.:** 123-92-2  
 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 OR INGESTION: Irritates the mucous membrane, depresses the central nervous system and is narcotic. Damage to kidney, liver, and lung can occur. Ingestion can also damage the gastro-intestinal tract. EYES: Irritation. SKIN: Has a defatting action on the skin and may cause dermatitis.
- 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:** 100 ppm.  
 3.5 **TLV-STEL:** Not listed.  
 3.6 **TLV-Ceiling:** Not listed.  
 3.7 **Toxicity by Ingestion:** Grade 1; LD<sub>50</sub> = 5 - 15 g/kg.  
 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 concentration. 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:** 0.015 ppm in air. 0.0006 ppm in water.  
 3.13 **IDLH Value:** 1,000 ppm  
 3.14 **OSHA PEL-TWA:** 100 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:** 77°F C.C.  
 4.2 **Flammable Limits in Air:** 1.0%-7.5%.  
 4.3 **Fire Extinguishing Agents:** Alcohol foam, CO<sub>2</sub>, or dry chemical.  
 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 reducing materials.  
 4.7 **Auto Ignition Temperature:** 680°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:** 45.2 (calc.)  
 4.12 **Flame Temperature:** Currently not available  
 4.13 **Combustion Molar Ratio (Reactant to Product):** 14.0 (calc.)  
 4.14 **Minimum Oxygen Concentration for Combustion (MOCC):** Not listed

### 7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** Currently not available  
 7.2 **Storage Temperature:** Ambient (cool).  
 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

### 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

### 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:** 287.6°F = 142°C = 415.2°K  
 9.4 **Freezing Point:** -109.3°F = -78.5°C = 194.7°K  
 9.5 **Critical Temperature:** 619.0°F = 326.1°C = 599.3°K  
 9.6 **Critical Pressure:** 411.5 psia = 28.0 atm = 2.84 MN/m<sup>2</sup>  
 9.7 **Specific Gravity:** 0.876 at 15°C.  
 9.8 **Liquid Surface Tension:** 24.77 dynes/cm = 0.02477 N/m at 20°C.  
 9.9 **Liquid Water Interfacial Tension:** 50.2 dynes/cm = 0.0502 N/m at 15°C.  
 9.10 **Vapor (Gas) Specific Gravity:** 4.5  
 9.11 **Ratio of Specific Heats of Vapor (Gas):** (est.) > 1 - 1.1  
 9.12 **Latent Heat of Vaporization:** (est.) 132 Btu/lb = 73.3 cal/g = 3.07 X 10<sup>5</sup> J/kg  
 9.13 **Heat of Combustion:** -14,402 Btu/lb = -8000 cal/g = 334.9 X 10<sup>3</sup> 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

### 6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:**  
 65 ppm/24-96 hr/mosquito fish/TL<sub>50</sub>/turbid water  
 120 ppm/48 hr/daphnia/TL<sub>50</sub>/23°C.  
 6.2 **Waterfowl Toxicity:** Currently not available  
 6.3 **Biological Oxygen Demand (BOD):** 38% (time unknown). 0.31 lb/lb; 5 days.  
 6.4 **Food Chain Concentration Potential:** None  
 6.5 **GESAMP Hazard Profile:**  
 Bioaccumulation: 0  
 Damage to living resources: 2  
 Human Oral hazard: 0  
 Human Contact hazard: I  
 Reduction of amenities: X

### 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
59	54.690		C	35	0.928	46	1.032
60	54.627		U	40	0.924	48	1.011
61	54.563		R	45	0.920	50	0.992
62	54.500		R	50	0.915	52	0.974
63	54.437		E	55	0.911	54	0.958
64	54.373		N	60	0.907	56	0.943
65	54.310		T	65	0.903	58	0.929
66	54.247		L	70	0.898	60	0.916
67	54.183		Y	75	0.894	62	0.904
68	54.120			80	0.890	64	0.892
			N	85	0.885	66	0.881
			O	90	0.881		
			T	95	0.877		
				100	0.872		
			A	105	0.868		
			V	110	0.864		
			A	115	0.859		
			I	120	0.855		
			L				
			A				
			B				
			L				
			E				

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
59	0.250	40	-1.247	40	0.04360		C
		60	-0.255	60	0.02693		U
		80	0.737	80	0.01026		R
		100	0.271	100	0.00640		R
		120	1.279	120	0.02307		E
		140	2.287	140	0.03973		N
		160	3.295	160	0.05640		T
		180	4.303	180	0.07306		L
		200	5.311	200	0.08973		Y
		220	6.320	220	0.10639		
		240	7.328	240	0.12306		N
		260	8.336	260	0.13972		O
		280	9.344	280	0.15639		T
							A
							V
							A
							I
							L
							A
							B
							L
							E