

# OCTANOIC ACID

OAA

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b> C-8 acid n-Caprylic acid 1-Heptanecarboxylic acid Hexacid 898 Neo-fat 8 n-Octoic acid	Oily liquid	Colorless	Slightly unpleasant, rancid taste
<p><b>Keep people away.</b>  <b>Avoid contact with liquid and vapor.</b>  <b>Wear rubber overclothing (including gloves).</b>  <b>Call fire department.</b>  <b>Notify local health and pollution control agencies.</b></p>			
<b>Fire</b>	Combustible. Water may be ineffective on fire. Wear self-contained breathing apparatus and protective clothing including rubber boots and heavy rubber gloves. Extinguish with dry chemical, alcohol foam, or CO <sub>2</sub> .		
<b>Exposure</b>	CALL FOR MEDICAL AID.  VAPOR Irritating to eyes, nose and throat. If inhaled, will cause coughing or difficult breathing. If in eyes, hold eyelids open and flush with plenty of water. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.  LIQUID Will burn skin and eyes. If swallowed, will cause nausea and vomiting. Remove contaminated clothing and shoes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water.		
<b>Water Pollution</b>	May be dangerous to aquatic life in high concentrations. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.		

### 1. CORRECTIVE RESPONSE ACTIONS

Stop discharge  
Dilute and disperse

### 2. CHEMICAL DESIGNATIONS

- 2.1 **CG Compatibility Group:** 4; Organic acids.  
 2.2 **Formula:** CH<sub>3</sub>(CH<sub>2</sub>)<sub>6</sub>CO<sub>2</sub>H  
 2.3 **IMO/UN Designation:** Currently not available  
 2.4 **DOT ID No.:** Not listed  
 2.5 **CAS Registry No.:** 124-07-2  
 2.6 **NAERG Guide No.:** Not listed  
 2.7 **Standard Industrial Trade Classification:** 51377

### 3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Full face self contained breathing apparatus, rubber boots, and heavy rubber gloves.  
 3.2 **Symptoms Following Exposure:** Harmful if swallowed, inhaled, or absorbed through skin. Material is extremely destructive to tissues of mucous membrane, and upper respiratory tract, eyes and skin. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting.  
 3.3 **Treatment of Exposure:** INHALATION: Call for medical aid. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. EYES - OR - SKIN: Flush with copious amounts of water for at least 15 minutes while removing contaminated clothing and shoes. Assure adequate flushing of the eyes by separating the eyelids with the fingers.  
 3.4 **TLV-TWA:** Not listed.  
 3.5 **TLV-STEL:** Not listed.  
 3.6 **TLV-Ceiling:** Not listed.  
 3.7 **Toxicity by Ingestion:** Grade 1; LD<sub>50</sub> = 10.08 g/kg (rat)  
 3.8 **Toxicity by Inhalation:** Currently not available.  
 3.9 **Chronic Toxicity:** Currently not available  
 3.10 **Vapor (Gas) Irritant Characteristics:** Vapors cause severe irritation of eyes and throat and can cause eye and lung injury. They cannot be tolerated even at low concentrations.  
 3.11 **Liquid or Solid Characteristics:** Fairly severe skin irritant. May cause pain and second-degree burns after a few minutes contact.  
 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:** 230°F C.C.  
 4.2 **Flammable Limits in Air:** Currently not available  
 4.3 **Fire Extinguishing Agents:** Carbon dioxide, dry chemical, alcohol foam, water spray.  
 4.4 **Fire Extinguishing Agents Not to Be Used:** Water may be ineffective.  
 4.5 **Special Hazards of Combustion Products:** Currently not available  
 4.6 **Behavior in Fire:** Currently not available  
 4.7 **Auto Ignition Temperature:** Currently not available  
 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:** 52.4 (calc.)  
 4.12 **Flame Temperature:** Currently not available  
 4.13 **Combustion Molar Ratio (Reactant to Product):** 16.0 (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:** Corrosive, attacks most common metals.  
 5.3 **Stability During Transport:** Stable.  
 5.4 **Neutralizing Agents for Acids and Caustics:** Sodium bicarbonate solution.  
 5.5 **Polymerization:** Will not occur.  
 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:** Currently not available  
 6.5 **GESAMP Hazard Profile:**  
 Bioaccumulation: 0  
 Damage to living resources: 1  
 Human Oral hazard: 0  
 Human Contact hazard: I  
 Reduction of amenities: X

### 7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** 99.5+%  
 7.2 **Storage Temperature:** Ambient.  
 7.3 **Inert Atmosphere:** Currently not available  
 7.4 **Venting:** Currently not available  
 7.5 **IMO Pollution Category:** D  
 7.6 **Ship Type:** Data 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:** Solid  
 9.2 **Molecular Weight:** 144.21  
 9.3 **Boiling Point at 1 atm:** 458.6°F = 237°C = 510.2°K  
 9.4 **Freezing Point:** 60.8-61.7°F = 16-16.5°C = 289.2-289.7°K  
 9.5 **Critical Temperature:** Currently not available  
 9.6 **Critical Pressure:** Currently not available  
 9.7 **Specific Gravity:** 0.910  
 9.8 **Liquid Surface Tension:** Currently not available  
 9.9 **Liquid Water Interfacial Tension:** Currently not available  
 9.10 **Vapor (Gas) Specific Gravity:** 5  
 9.11 **Ratio of Specific Heats of Vapor (Gas):** Currently not available  
 9.12 **Latent Heat of Vaporization:** Currently not available  
 9.13 **Heat of Combustion:** Currently not available  
 9.14 **Heat of Decomposition:** Currently not available  
 9.15 **Heat of Solution:** Currently not available  
 9.16 **Heat of Polymerization:** Currently not available  
 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
C U R R E N T L Y  N O T  A V A I L A B L E		C U R R E N T L Y  N O T  A V A I L A B L E		C U R R E N T L Y  N O T  A V A I L A B L E		C U R R E N T L Y  N O T  A V A I 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
68	0.068	172	0.019	C U R R E N T L Y  N O T  A V A I L A B L E		0	0.312
		237	0.097			25	0.324
		255	0.193			50	0.337
		277	0.387			75	0.349
		303	0.774			100	0.362
		320	1.160			125	0.374
		342	1.934			150	0.385
		375	3.867			175	0.397
		417	7.735			200	0.408
		460	14.696			225	0.419
						250	0.430
						275	0.441
						300	0.451
						325	0.461
						350	0.471
						375	0.481
				400	0.491		
				425	0.500		
				450	0.510		
				475	0.519		
				500	0.528		
				525	0.536		
				550	0.545		
				575	0.553		
				600	0.561		