

ACETYL PEROXIDE SOLUTION

APS

CAUTIONARY RESPONSE INFORMATION

Common Synonyms Diacetyl peroxide solution	Liquid Colorless Sharp odor
Sinks in water.	
<p>Stop discharge if possible. Keep people away. Call fire department. Avoid contact with liquid. Evacuate. Isolate and remove discharged material. Notify local health and pollution control agencies.</p>	
Fire	<p>Combustible. May explode on contact with combustibles. Containers may explode in fire. Combat fires from safe distance or protected location. Flood discharge area with water. Cool exposed containers with water.</p>
Exposure	<p>Call for medical aid.</p> <p>VAPOR Irritating to eyes, nose and throat. Move victim to fresh air.</p> <p>LIQUID 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 and have victim induce vomiting. IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm.</p>
Water Pollution	<p>Effect of low concentrations on aquatic life is unknown. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.</p>

1. CORRECTIVE RESPONSE ACTIONS

Stop discharge
Collection Systems: Pump; Dredge
Do not burn

2. CHEMICAL DESIGNATIONS

2.1 CG Compatibility Group: Not listed
2.2 Formula: CH₃CO(O₂)CCH₃ in dimethyl phthalate
2.3 IMO/UN Designation: 5.2/2084
2.4 DOT ID No.: 2084
2.5 CAS Registry No.: 110-22-5
2.6 NAERG Guide No.: 148
2.7 Standard Industrial Trade Classification: 51699

3. HEALTH HAZARDS

3.1 **Personal Protective Equipment:** Protective goggles; rubber apron and gloves.
3.2 **Symptoms Following Exposure:** Contact with liquid causes irritation of eyes and skin. If ingested, irritates mouth and stomach.
3.3 **Treatment of Exposure:** EYES: wash with plenty of water and get medical attention. SKIN: wash with plenty of soap and water. INGESTION: induce vomiting and call a physician.
3.4 **TLV-TWA:** Not listed.
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:** Currently not available
3.10 **Vapor (Gas) Irritant Characteristics:** Currently not available
3.11 **Liquid or Solid Characteristics:** Currently not available
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:** 113°F O.C.
4.2 **Flammable Limits in Air:** Not pertinent
4.3 **Fire Extinguishing Agents:** Water, dry chemical, carbon dioxide
4.4 **Fire Extinguishing Agents Not to Be Used:** Not pertinent
4.5 **Special Hazards of Combustion Products:** Not pertinent
4.6 **Behavior in Fire:** May explode. Burns with accelerating intensity.
4.7 **Auto Ignition Temperature:** Explodes
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:** May ignite combustible materials such as wood.
5.3 **Stability During Transport:** Heat-and shock- sensitive crystals may separate at very low temperatures during transport.
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:** 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:** 25% acetyl peroxide; 75% dimethyl phthalate
7.2 **Storage Temperature:** 32°F-100°F (32-41°F optimum)
7.3 **Inert Atmosphere:** No requirement
7.4 **Venting:** Pressure-vacuum
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:** Forbidden
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:**

Category	Classification
Health Hazard (Blue).....	1
Flammability (Red).....	2
Instability (Yellow).....	4

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:** Mixture
9.3 **Boiling Point at 1 atm:** Decomposes
9.4 **Freezing Point:** 17°F = -8°C = 265°K
9.5 **Critical Temperature:** Not pertinent
9.6 **Critical Pressure:** Not pertinent
9.7 **Specific Gravity:** 1.2 at 20°C (liquid)
9.8 **Liquid Surface Tension:** (est.) 30 dynes/cm = 0.030 N/m at 20°C
9.9 **Liquid Water Interfacial Tension:** (est.) 30 dynes/cm = 0.030 N/m at 20°C
9.10 **Vapor (Gas) Specific Gravity:** 4.07
9.11 **Ratio of Specific Heats of Vapor (Gas):** Not pertinent
9.12 **Latent Heat of Vaporization:** Not pertinent
9.13 **Heat of Combustion:** (est.) -15,700 Btu/lb = -8,750 cal/g = -366 X 10⁵ J/kg
9.14 **Heat of Decomposition:** (est.) -50 Btu/lb = -28 cal/g = -1.2 X 10⁵ J/kg
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
34	76.089	34	0.420	34	0.967	34	5.243
36	76.020	36	0.420	36	0.967	36	5.084
38	75.950	38	0.420	38	0.967	38	4.930
40	75.879	40	0.420	40	0.967	40	4.783
42	75.809	42	0.420	42	0.967	42	4.641
44	75.740	44	0.420	44	0.967	44	4.504
46	75.669	46	0.420	46	0.967	46	4.372
48	75.599	48	0.420	48	0.967	48	4.245
50	75.530	50	0.420	50	0.967	50	4.123
52	75.459	52	0.420	52	0.967	52	4.005
54	75.389	54	0.420	54	0.967	54	3.892
56	75.320	56	0.420	56	0.967	56	3.782
58	75.250	58	0.420	58	0.967	58	3.677
60	75.179	60	0.420	60	0.967	60	3.575
62	75.110	62	0.420	62	0.967	62	3.476
64	75.049	64	0.420	64	0.967	64	3.381
66	74.980	66	0.420	66	0.967	66	3.290
68	74.910	68	0.420	68	0.967	68	3.201
70	74.839	70	0.420	70	0.967	70	3.116
72	74.770	72	0.420	72	0.967	72	3.033
74	74.700	74	0.420	74	0.967	74	2.954
76	74.629	76	0.420	76	0.967	76	2.877
78	74.559	78	0.420	78	0.967	78	2.802
80	74.490	80	0.420	80	0.967	80	2.730
82	74.419	82	0.420	82	0.967	82	2.660
84	74.349	84	0.420	84	0.967	84	2.593

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 N S O L U B L E		N O T P E R T I N E N T		N O T P E R T I N E N T		N O T P E R T I N E N T