

ISOPROPYL PERCARBONATE

IPC

CAUTIONARY RESPONSE INFORMATION

Common Synonyms Diisopropyl percarbonate Diisopropyl peroxydicarbonate Isopropyl peroxydicarbonate bis-(1-Methylethyl) ester Peroxydicarbonic acid,	Solid (Packed in Dry Ice) White Sharp Unpleasant Odor
Sinks in water. Freezing point is 48°F.	
<p>Keep people away. Shut off ignition sources. Call fire department. Avoid contact with solid and dust. Notify local health and pollution control agencies.</p>	
Fire	<p>COMBUSTIBLE. May cause fire on contact with combustibles. Will increase the intensity of a fire. Containers may explode in fire. DO NOT USE DRY CHEMICALS, CARBON DIOXIDE, OR FOAM ON FIRE. Flood discharge area with water from safe distance or protected location. Cool exposed containers with water.</p>
Exposure	<p>CALL FOR MEDICAL AID. DUST 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.</p> <p>SOLID 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. 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
 Contain
 Collection Systems: Skim; Pump;
 Dredge

2. CHEMICAL DESIGNATIONS

2.1 **CG Compatibility Group:** Not listed.
 2.2 **Formula:** C₃H₇O₅
 2.3 **IMO/UN Designation:** Not listed
 2.4 **DOT ID No.:** Not listed
 2.5 **CAS Registry No.:** 105-64-6
 2.6 **NAERG Guide No.:** 148
 2.7 **Standard Industrial Trade Classification:** 51699

3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Rubber gloves and shoes; hard hat; chemical splash goggles; plastic apron; respirator (depending on solvent used)
- 3.2 **Symptoms Following Exposure:** Inhalation overexposure unlikely, but prolonged exposure may cause lung edema. Contact with eyes may cause irritation. Solutions are severe primary skin irritants.
- 3.3 **Treatment of Exposure:** INHALATION: move to uncontaminated atmosphere; if breathing is difficult, give oxygen. EYES: flush with copious amounts of water. SKIN: wash off with isopropyl alcohol and water; 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:** Grade 2; LD₅₀ = 0.5-5 g/kg
 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:**
 Not pertinent (combustible solid)
- 4.2 **Flammable Limits in Air:** Not pertinent
- 4.3 **Fire Extinguishing Agents:** Water
- 4.4 **Fire Extinguishing Agents Not to Be Used:** All extinguishing agents may be ineffective.
- 4.5 **Special Hazards of Combustion**
Products: Flammable and/or toxic gases formed in fires include acetone, isopropyl alcohol, acetaldehyde, and ethane.
- 4.6 **Behavior in Fire:** Undergoes auto-accelerative decomposition and may self-ignite. Confinement may lead to detonation. Fires very difficult to extinguish because air not needed
- 4.7 **Auto Ignition Temperature:** Currently not available
- 4.8 **Electrical Hazards:** Not pertinent
- 4.9 **Burning Rate:** Not pertinent
- 4.10 **Adiabatic Flame Temperature:** Currently not available
- 4.11 **Stoichiometric Air to Fuel Ratio:** 40.5 (calc.)
- 4.12 **Flame Temperature:** Currently not available
- 4.13 **Combustion Molar Ratio (Reactant to Product):** 15.0 (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:** May decompose with formation of oxygen when in contact with metals
- 5.3 **Stability During Transport:** Unstable above 0°F with formation of oxygen gas
- 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:** Technical, 98.5-99+%
- 7.2 **Storage Temperature:** Below -18°C (0°F)
- 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:** 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:** Liquid
- 9.2 **Molecular Weight:** 206.2
- 9.3 **Boiling Point at 1 atm:** Not pertinent (decomposes)
- 9.4 **Freezing Point:** 46-50°F = 8-10°C = 281-283°K
- 9.5 **Critical Temperature:** Not pertinent
- 9.6 **Critical Pressure:** Not pertinent
- 9.7 **Specific Gravity:** 1.08 at 15°C (solid)
- 9.8 **Liquid Surface Tension:** Not pertinent
- 9.9 **Liquid Water Interfacial Tension:** Not pertinent
- 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:** Not pertinent
- 9.13 **Heat of Combustion:** -8,500 Btu/lb = -4,720 cal/g = -198 X 10⁵ J/kg
- 9.14 **Heat of Decomposition:** -670 Btu/lb = -370 cal/g = 15.5 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
59	67.419		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

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
77	0.040		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