

# 2-BUTANONE PEROXIDE

BNP

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b> 2-Butanone, peroxide Butanox M50, M105, LPT Chaloxyd MEKP-ha 1, -la 1 Ethylmethylketone peroxide Ketonox MEKP Methylmethylketone peroxide	Liquid                      Colorless                      Acetone-like odor
<p style="color: red;">Avoid contact with vapors and liquid. Keep people away.                  Evacuate.                  Wear self-contained positive pressure breathing apparatus and full protective clothing.                  Stay upwind; keep out of low areas.                  Shut off ignition sources. Call fire department.                  Stop leak if you can do it without risk.                  Notify local health and pollution control agencies.                  Protect water intakes.</p>	
<b>Fire</b>	COMBUSTIBLE. May be ignited by heat, sparks or flames. Container may explode in heat or fire. Runoff to sewer may create fire or explosion hazard. Fire may produce irritating or poisonous gases. Extinguish fires with dry chemical, CO <sub>2</sub> , water spray or alcohol foam. For massive fire in cargo area, use unmanned hose holder or monitor nozzles. If fire can be controlled, cool container with water from unmanned hose holder or monitor nozzles until after fire is out. If this is impossible, withdraw from area and let fire burn.
<b>Exposure</b>	CALL FOR MEDICAL AID.  VAPOR Vapor extremely irritating. Contact of vapor with eyes may cause blindness. Move victim to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.  LIQUID Harmful if swallowed or absorbed through skin. IF IN EYES: hold eyelids open, flush with running water for at least 15 minutes. Flush affected areas with plenty of water. Wash skin with soap and water. Remove and isolate contaminated clothing and shoes at the site. IF SWALLOWED: keep victim quiet and maintain normal body temperature.
<b>Water Pollution</b>	Effects of low concentrations on aquatic life are not known. May be harmful 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
- Do not burn

### 2. CHEMICAL DESIGNATIONS

- 2.1 CG Compatibility Group: Not listed.
- 2.2 Formula: (CH<sub>3</sub>)<sub>2</sub>CHCHOH-O<sub>2</sub>
- 2.3 IMO/UN Designation: 5.2/2550
- 2.4 DOT ID No.: Not listed
- 2.5 CAS Registry No.: 1338-23-4
- 2.6 NAERG Guide No.: Not listed.
- 2.7 Standard Industrial Trade Classification: 51699

### 3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Approved respirator, chemical safety gloves, heavy rubber gloves, chemical safety goggles, rubber boots, protective clothing.
- 3.2 **Symptoms Following Exposure:** Extremely destructive to tissue of the mucous membranes, upper respiratory tract, eyes, and skin. Symptoms of exposure include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.
- 3.3 **Treatment of Exposure:** EYES: Hold eyelids open, flush with running water for at least 15 minutes. SKIN: Remove contaminated clothing and shoes, flush affected areas with plenty of running water. Wash with soap and water. INGESTION: Call a physician.
- 3.4 TLV-TWA: Not listed.
- 3.5 TLV-STEL: Not listed.
- 3.6 TLV-Ceiling: 0.2 ppm.
- 3.7 Toxicity by Ingestion: Grade 3; LD<sub>50</sub> = 470 mg/kg (mouse)
- 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:** Severe skin irritant. Causes second and third degree burns on short contact and is very injurious to the eyes.
- 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: 180°F C.C.
- 4.2 Flammable Limits in Air: Currently not available
- 4.3 Fire Extinguishing Agents: Water spray, dry chemical, CO<sub>2</sub>, or alcohol foam.
- 4.4 Fire Extinguishing Agents Not to Be Used: Not pertinent
- 4.5 Special Hazards of Combustion Products: Currently not available
- 4.6 Behavior in Fire: Explosive.
- 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): 20.0 (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: Contact with other materials may cause explosion.
- 5.3 Stability During Transport: Currently not available
- 5.4 Neutralizing Agents for Acids and Caustics: Dry lime, soda ash
- 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: Currently not available
- 6.5 GESAMP Hazard Profile: Not listed

### 7. SHIPPING INFORMATION

- 7.1 Grades of Purity: 50 wt. % in dimethyl phthalate
- 7.2 Storage Temperature: Refrigerate
- 7.3 Inert Atmosphere: Currently not available
- 7.4 Venting: Vent periodically
- 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: 10 pounds
- 8.7 EPA Pollution Category: A
- 8.8 RCRA Waste Number: U160
- 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: 176.22
- 9.3 Boiling Point at 1 atm: Currently not available
- 9.4 Freezing Point: Currently not available
- 9.5 Critical Temperature: Currently not available
- 9.6 Critical Pressure: Currently not available
- 9.7 Specific Gravity: 1.170 at 20°C
- 9.8 Liquid Surface Tension: Currently not available
- 9.9 Liquid Water Interfacial Tension: Currently not available
- 9.10 Vapor (Gas) Specific Gravity: 6.08 (est)
- 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
	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	0 25 50 75 100 125 150 175 200 225 250 275 300 325 350 375 400 425 450 475 500 525 550 575 600	0.297 0.307 0.317 0.327 0.337 0.347 0.357 0.367 0.377 0.387 0.397 0.407 0.417 0.427 0.436 0.446 0.456 0.466 0.476 0.486 0.496 0.506 0.516 0.526 0.536