# BISMUTH OXYCHLORIDE

**BOC**

## CAUTIONARY RESPONSE INFORMATION

| **Common Synonyms** | Solid | White | Odorless |
|---|---|---|---|
| Basic bismuth choride<br>Bismuth chloride oxide<br>Bismuth subchloride<br>Bismuthyl chloride<br>Pearl white | Sinks in water. | | |

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|---|---|
| **Fire** | Not flammable.<br>Irritating gases may be produced when heated.<br>Wear goggles and self-contained breathing apparatus. |
| **Exposure** | CALL FOR MEDICAL AID.<br>DUST<br>Irritating to eyes, nose and throat.<br>Harmful if inhaled.<br>If in eyes, hold eyelids open and flush with plenty of water.<br>If breathing has stopped, give artificial respiration.<br>If breathing is difficult, give oxygen.<br><br>SOLID<br>Irritating to skin and eyes.<br>Harmful if swallowed.<br>Remove contaminated clothing and shoes.<br>Flush affected areas with plenty of water.<br>IF IN EYES, hold eyelids open and flush with plenty of water.<br>IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk.<br>IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm. |
| **Water Pollution** | Effect of low concentrations on aquatic life is unknown.<br>May be dangerous if it enters water intakes.<br>Notify local health and wildlife officials.<br>Notify operators of nearby water intakes. |

## 1. CORRECTIVE RESPONSE ACTIONS
Stop discharge
Collection Systems: Dredge

## 2. CHEMICAL DESIGNATIONS
**2.1 CG Compatibility Group:** Not listed.
**2.2 Formula:** BiOCl
**2.3 IMO/UN Designation:** Not listed
**2.4 DOT ID No.:** Not listed
**2.5 CAS Registry No.:** 7787-59-9
**2.6 NAERG Guide No.:** Not listed
**2.7 Standard Industrial Trade Classification:** 52329

## 3. HEALTH HAZARDS
**3.1 Personal Protective Equipment:** Goggles or face shield; protective gloves; dust mask
**3.2 Symptoms Following Exposure:** Contact with dust causes mild eye irritation and can cause skin rashes.
**3.3 Treatment of Exposure:** EYES:  flush with water.
**3.4 TLV-TWA:** Not listed.
**3.5 TLV-STEL:** Not listed.
**3.6 TLV-Ceiling:** Not listed.
**3.7 Toxicity by Ingestion:** Grade 0;  $LD_{50}$ > 21.5 g/kg (rat)
**3.8 Toxicity by Inhalation:** May cause irritation to mucous membranes.
**3.9 Chronic Toxicity:** May cause black spots on gums, foul breath, and salivation.
**3.10 Vapor (Gas) Irritant Characteristics:** Currently not available
**3.11 Liquid or Solid Characteristics:** Currently not available
**3.12 Odor Threshold:** Odorless
**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 flammable
**4.2 Flammable Limits in Air:** Not flammable
**4.3 Fire Extinguishing Agents:** Not pertinent
**4.4 Fire Extinguishing Agents Not to Be Used:** Not pertinent
**4.5 Special Hazards of Combustion Products:** Irritating hydrogen chloride gas may form in fire.
**4.6 Behavior in Fire:** Emits toxic fumes of chloride ion and bismuth when heated to decomposition.
**4.7 Auto Ignition Temperature:** Not pertinent
**4.8 Electrical Hazards:** Not pertinent
**4.9 Burning Rate:** Not pertinent
**4.10 Adiabatic Flame Temperature:** Currently not available
**4.11 Stoichometric Air to Fuel Ratio:** Not pertinent
**4.12 Flame Temperature:** Currently not available
**4.13 Combustion Molar Ratio (Reactant to Product):** Not pertinent
**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:** Currently not available
**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

## 6. WATER POLLUTION
**6.1 Aquatic Toxicity:** Currently not available
**6.2 Waterfowl Toxicity:** Currently not available
**6.3 Biological Oxygen Demand (BOD):** None
**6.4 Food Chain Concentration Potential:** Currently not available
**6.5 GESAMP Hazard Profile:** Not listed

## 7. SHIPPING INFORMATION
**7.1 Grades of Purity:** Dry powder, 100%; aqueous concentrates; dispersions of solid in mineral oil or castor oil.
**7.2 Storage Temperature:** Ambient
**7.3 Inert Atmosphere:** No requirement
**7.4 Venting:** Open
**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:** Solid
**9.2 Molecular Weight:** 260.4
**9.3 Boiling Point at 1 atm:** Not pertinent (decomposes)
**9.4 Freezing Point:** Not pertinent
**9.5 Critical Temperature:** Not pertinent
**9.6 Critical Pressure:** Not pertinent
**9.7 Specific Gravity:** 7.7 at 20°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:** Not pertinent
**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

## 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 |
| | NOT PERTINENT | | NOT PERTINENT | | NOT PERTINENT | | NOT PERTINENT |

| 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 |
| | INSOLUBLE | | NOT PERTINENT | | NOT PERTINENT | | NOT PERTINENT |