# Safety Data Sheet: PHMB

## 1. Identification

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| **Product** | PHMB; CAS 27083-27-8 / 32289-58-0; EC Polymeric substance |
| **Use** | Polymeric antimicrobial raw material for professional industrial preservation formulations. |
| **Company** | Hainan Zhongxin Chemical Co., Ltd. (ZXCHEM) |
| **Address** | Room 1001, Building A, Caohejing Center, No. 1520 Gumei Road, Xuhui District, Shanghai, China |
| **Telephone / email** | +86-21-54265599 / sales@zxchem.com.cn |
| **Emergency contact** | ZXCHEM office number above, office hours, China time (UTC+8). For urgent medical assistance contact local emergency services. |
| **Scope** | Reference safety information for PHMB. The reference composition, concentration and supply-grade differences are described in Section 3. This document does not certify the composition or transport status of a specific delivered batch or a different formulation. |

## 2. Hazards Identification

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| **Classification** | Fatal inhalation hazard; serious eye damage; skin sensitization; suspected carcinogenicity; repeated-exposure organ toxicity; aquatic hazard. |
| **Signal word / symbols** | Danger; GHS05, GHS06, GHS08, GHS09 |
| **Hazard statements** | H303: possible harm from ingestion. H330: fatal inhalation. H318: serious eye damage. H317: allergic skin response. H351: suspected carcinogenicity. H372: organ damage after repeated exposure. H410: persistent aquatic toxicity. |
| **Prevention** | Use adequate ventilation; avoid inhaling mist. Prevent skin and eye contact. Wear suitable chemical-resistant gloves and eye protection. Wash after handling; keep food and drink out of the work area. |
| **Response** | After exposure, stop work and seek medical advice. For severe exposure obtain urgent medical care. Rinse contaminated skin or eyes with water; move an inhalation casualty to fresh air. |
| **Environment** | Prevent uncontrolled release to drains, soil or surface water. Collect spills for appropriate disposal. |

## 3. Composition / Information on Ingredients

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| **Reference ingredient** | PHMB hydrochloride polymer, CAS32289-58-0, 20% aqueous reference solution; water carrier. Polymer chain lengths vary. |
| **Supply grade** | 20% solution (solids 19–21%) |
| **Applicability** | The cited concentration or purity describes the reference material. It is not a certificate of analysis for the delivered batch; different solvents or dilutions require the matching supplier safety document. |

## 4. First-Aid Measures

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| **General** | Protect the rescuer from exposure and show the product information to medical personnel. Obtain medical advice if symptoms occur or exposure is significant. |
| **Inhalation** | Move to fresh air and keep the person comfortable. Seek medical care for breathing difficulty or persistent symptoms. Avoid exposing rescuers to mist. |
| **Skin** | Remove contaminated clothing and rinse skin thoroughly with water. Seek medical advice for persistent irritation. |
| **Eyes** | Rinse gently with clean water for at least 15 minutes. Remove contact lenses when easy and continue rinsing. Obtain urgent medical care. |
| **Ingestion** | Rinse the mouth. Do not induce vomiting. Give nothing by mouth to an unconscious person. Obtain emergency medical attention. |
| **Effects / treatment** | Potentially fatal inhalation exposure, serious eye injury, skin sensitization and adverse effects from repeated exposure. Treatment is symptomatic and directed by a clinician. |

## 5. Fire-Fighting Measures

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| **Extinguishing media** | Use water spray, foam, dry chemical or carbon dioxide suited to the surrounding fire. |
| **Hazards** | Fire can produce carbon and nitrogen oxides and hydrogen chloride-containing fumes. |
| **Protection** | Firefighters require suitable protective clothing and self-contained breathing equipment. Prevent contaminated firefighting water entering drains. |

## 6. Accidental Release Measures

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| **Personnel** | Isolate the spill and provide ventilation. Use chemical-resistant gloves and eye protection; avoid contact and mist exposure. |
| **Environment** | Contain the release and protect drains and waterways. Report significant environmental contamination to the responsible authority. |
| **Cleanup** | Stop the leak if safe. Absorb liquid with a compatible inert material and collect in closed labelled containers. Do not wash into drains. |

## 7. Handling and Storage

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| **Handling** | Use controlled transfer and effective ventilation. Avoid generating mist and prevent contamination of the work area. |
| **Storage** | Store sealed in original packaging in a cool, dry and well-ventilated area. Protect from contamination. |
| **Incompatibilities** | Strong oxidizers and incompatible reactive chemicals; avoid aerosol generation. |
| **Specific use** | Evaluate compatibility and appropriate operating conditions in the complete formulation before industrial use. |

## 8. Exposure Controls / Personal Protection

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| **Exposure limits** | No product-specific occupational exposure limit is established in this reference compilation. Apply applicable local workplace requirements. |
| **Engineering controls** | Use local extraction where mist can be generated. Maintain accessible eyewash and emergency washing facilities. |
| **Personal protection** | Wear chemical-resistant gloves selected for the task, suitable protective clothing and splash goggles. Add face protection for splash-prone tasks. |
| **Respiratory protection** | Use a properly selected respirator under a respiratory-protection program where engineering controls do not adequately limit airborne exposure. |
| **Hygiene** | Wash after handling, remove contaminated clothing promptly and do not eat, drink or smoke in the work area. |

## 9. Physical and Chemical Properties

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| **Appearance** | Colorless to pale yellow transparent liquid |
| **Formula / molecular weight** | / |
| **Other properties** | Product-specific values for odor threshold, vapor pressure, partition coefficient, autoignition temperature and viscosity are not supplied by the selected reference set. No values are inferred. |

## 10. Stability and Reactivity

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| **Stability** | Handle and store under the recommended conditions. Prevent contamination and unnecessary heating. |
| **Incompatibilities** | Strong oxidizers and incompatible reactive chemicals; avoid aerosol generation. |
| **Decomposition** | Fire can produce carbon and nitrogen oxides and hydrogen chloride-containing fumes. |

## 11. Toxicological Information

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| **Exposure effects** | Potentially fatal inhalation exposure, serious eye injury, skin sensitization and adverse effects from repeated exposure. |
| **Reference classification** | Fatal inhalation hazard; serious eye damage; skin sensitization; suspected carcinogenicity; repeated-exposure organ toxicity; aquatic hazard. |
| **Data limits** | No product-specific numerical toxicity or reproductive-effect study values are asserted by this compilation. Use the matched manufacturer data for a detailed assessment. |

## 12. Ecological Information

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| **Environmental effects** | Quantitative aquatic toxicity, biodegradation and bioaccumulation results are not supplied in this compilation. |
| **Controls** | Prevent uncontrolled release, collect spills and dispose of contaminated material through an authorized route. |
| **Assessment** | No product-specific PBT/vPvB assessment is claimed. Absence of data does not establish absence of environmental effects. |

## 13. Disposal Considerations

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| **Product** | Collect surplus product and contaminated cleanup material for disposal by an authorized chemical-waste contractor in accordance with local requirements. |
| **Packaging** | Containers may retain product residues. Do not reuse contaminated packaging without an approved cleaning process; use an authorized disposal route. |

## 14. Transport Information

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| **Classification** | Class 6.1 — Toxic |
| **UN number** | UN 2810 |
| **Shipping name** | TOXIC LIQUID, ORGANIC, N.O.S. (polyhexamethylene biguanide hydrochloride) |
| **Class / packing group** | Class 6.1 / Packing Group II; marine pollutant |
| **Transport precautions** | Protect packaging and closures from damage, secure loads and prevent releases. This reference is not a shipping declaration for a specific consignment. |

## 15. Regulatory Information

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| **Identity** | PHMB; CAS 27083-27-8 / 32289-58-0; EC Polymeric substance |
| **HS reference** | 391190; reference heading rather than a destination customs ruling. |
| **Compliance** | Apply applicable workplace, environmental and transport rules. A raw-material listing does not establish authorization for a finished disinfectant or biocidal product. |
| **Assessment** | No ZXCHEM-specific chemical safety assessment or destination registration is asserted. |

## 16. Other Information

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| **Hazard meanings** | H303: possible harm from ingestion. H330: fatal inhalation. H318: serious eye damage. H317: allergic skin response. H351: suspected carcinogenicity. H372: organ damage after repeated exposure. H410: persistent aquatic toxicity. |
| **Limitations** | Prepared as reference safety information for the identified material. It is not a batch analytical certificate or safety assessment of a different solvent-containing formulation. |
| **Revision** | 2026.2; prepared 2026-10-06. Customer-document branding and title corrected; technical safety data retained. |
| **Document scope** | Reference safety information for the material and grade described in Sections 1 and 3. Different concentrations, solvents or formulations require the applicable safety information. This is not a batch analytical certificate. |

Revision: 2026.2 | Revision date: 2026-10-06