# Melamine

## 1. Identification

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| **Product** | Melamine |
| **CAS / EC** | 108-78-1 / 203-615-4 |
| **Use** | Triazine raw material for melamine-formaldehyde resins, laminates and industrial coatings. |
| **Uses advised against** | Food and feed use; unqualified consumer, pharmaceutical or other applications outside industrial material supply. |
| **Supplier** | Hainan Zhongxin Chemical Co., Ltd. (ZXCHEM) |
| **Address** | Room 1001, Building A, Caohejing Center, No. 1520 Gumei Road, Xuhui District, Shanghai, China |
| **Contact** | +86-21-54265599 \| sales@zxchem.com.cn \| www.zxchem.com |
| **Emergency contact** | +86-21-54265599; office hours, China time UTC+8. For an urgent incident, contact local emergency services. |
| **Scope** | Reference safety information for Melamine. 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. Hazard identification

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| **Classification** | Carcinogenicity2; reproductive toxicity2, fertility; STOT repeated exposure2, urinary system and reproductive organs. |
| **Signal word** | Warning |
| **Pictograms** | GHS08 |
| **Hazard statements** | H351: Suspected of causing cancer. H361f: Suspected of damaging fertility. H373: May cause damage to organs through prolonged or repeated exposure. |
| **Prevention** | P264: Wash exposed skin after handling. P280: Wear suitable protective gloves, clothing and eye protection. P260/P271: Avoid inhalation; use adequate ventilation and effective exposure controls. P201/P202: Obtain instructions before use; understand the precautions before handling. P308/P313: Seek medical advice after exposure or concern. |
| **Response** | Follow the exposure-specific first-aid measures in Section 4. Remove contaminated clothing. Seek urgent advice for severe symptoms. |
| **Storage / disposal** | Keep closed under the conditions in Section 7. Dispose through an authorized waste route under local rules. |
| **Other hazards** | Dust, splashes, process conditions and decomposition can create exposure risks not represented by the commercial assay. |



## 3. Composition/information on ingredients

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| **Melamine / component** | 108-78-1; EC 203-615-4 |
| **Supply concentration or grade** | ≥99.98% |
| **Composition scope** | Melamine solid reference, revision2024. GHS reference classifications describe solid melamine, not a cured resin. Commercial ≥99.98% limits are separate; this grade is not for food or feed. |

## 4. First-aid measures

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| **Eye contact** | Rinse eyes immediately with water for at least 15 minutes; remove contact lenses when easily possible and continue rinsing. Seek medical attention if irritation persists. |
| **Inhalation** | Move to fresh air without exposing rescuers. Seek medical attention for persistent or developing symptoms. |
| **Skin contact** | Remove contaminated clothing and rinse thoroughly with water. Seek care if irritation or rash develops; wash clothing before reuse. |
| **Ingestion** | Rinse the mouth. Do not induce vomiting or give anything by mouth to an unconscious person. Seek medical advice after substantial ingestion or if symptoms occur. |
| **Symptoms** | Suspected carcinogen and fertility hazard; repeated exposure may damage urinary and reproductive organs. |
| **Immediate treatment** | Treat symptoms. Seek medical advice for persistent effects; protect rescuers against secondary exposure. |

## 5. Fire-fighting measures

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| **Media / specific hazards** | Use water spray, dry chemical or foam appropriate to the incident. High-temperature decomposition can release ammonia and nitrogen oxides. Protect firefighters with independent breathing air and full clothing. |
| **Protection** | Use full protective equipment and self-contained breathing apparatus. Fight from a safe position; contain contaminated firewater and cool exposed containers when safe. |

## 6. Accidental release measures

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| **Personal / environmental precautions** | Restrict entry, avoid exposure and prevent environmental release. Use the controls and protection in Section 8. |
| **Containment / cleanup** | Exclude unprotected personnel and collect the solid without creating airborne dust, using suitable tools and labeled waste containers. Prevent drain and waterway entry. |
| **References** | See Sections 7, 8 and 13 for handling, protection and disposal. |

## 7. Handling and storage

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| **Handling** | Avoid contact and inhalation; maintain ventilation and good hygiene. Use suitable equipment and prevent chemical contamination. |
| **Storage** | Keep dry and tightly closed in a cool, ventilated area away from incompatible acids and strong oxidizers. Control dust and avoid excessive heat; maintain secure industrial storage. |
| **Incompatibilities** | Stable under recommended conditions. Avoid strong acids, oxidizers, contamination and excessive heating. Elevated-temperature decomposition can generate hazardous nitrogen-containing fumes. |
| **Specific end use** | Triazine raw material for melamine-formaldehyde resins, laminates and industrial coatings. |

## 8. Exposure controls/personal protection

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| **Control parameters** | No supply-specific occupational exposure limit or DNEL/PNEC is established by this record. Apply local substance and particulate exposure limits where relevant. |
| **Engineering and personal protection** | Use closed transfer or local extraction. Provide an eyewash and safety shower. Wear chemical-resistant gloves selected for the actual exposure, protective clothing and splash goggles. For airborne dust, use a suitable approved respirator selected through a workplace risk assessment; emergency or unknown atmospheres require independent air supply. |
| **Hygiene / environmental control** | Wash after handling; separate contaminated clothing. Contain product and process effluent; do not eat or drink in handling areas. |

## 9. Physical and chemical properties

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| **Physical state / appearance** | White crystalline powder |
| **Formula / formula weight** | C3H6N6; 126.12 g/mol; component identity |
| **pH, legacy descriptor** | 8.1–8.2 test basis not defined |
| **Bulk density, legacy descriptor** | 700–900 kg/m³ |
| **Odor / odor threshold** | No supply-grade value provided. |
| **Boiling / decomposition point** | No supply-grade limit provided. |
| **Flammability / flash point** | No supply-grade test value provided; see fire and reactivity information in Sections 5 and 10. |
| **Vapor pressure / density** | No supply-grade value provided. |
| **Partition coefficient / autoignition** | No supply-grade value provided. |

## 10. Stability and reactivity

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| **Reactivity / stability / reactions** | Stable under recommended conditions. Avoid strong acids, oxidizers, contamination and excessive heating. Elevated-temperature decomposition can generate hazardous nitrogen-containing fumes. |
| **Conditions and materials to avoid** | Follow the incompatible-material and storage requirements in Section 7. |
| **Decomposition products** | See Section 5. No normal-storage decomposition is indicated under the recommended conditions. |

## 11. Toxicological information

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| **Routes / effects** | Suspected carcinogen and fertility hazard; repeated exposure may damage urinary and reproductive organs. Reference oral LD50 rat3161mg/kg and dermal LD50 rabbit>2000mg/kg are not batch tests. |
| **Other endpoints** | Supply-batch sensitization, mutagenicity, carcinogenicity, reproduction and repeated-dose testing has not been provided. This does not override the classifications and target organs listed in Section 2. |
| **Mixture assessment** | Reference-substance or component results are not delivered-batch analytical or toxicological results. |

## 12. Ecological information

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| **Aquatic toxicity / behavior** | No supply-batch aquatic or environmental fate testing is supplied. Avoid concentrated releases to waterways and manage residues through authorized waste routes. |
| **Other environmental endpoints** | Supply-batch PBT/vPvB, endocrine-disruption, persistence, degradation, mobility and bioaccumulation assessments have not been provided. Do not infer absence of effects from missing data. |

## 13. Disposal considerations

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| **Product and residues** | Characterize waste under applicable local rules and use a licensed waste contractor. Do not discharge chemical residues or contaminated process water to drains. |
| **Contaminated packaging** | Do not reuse contaminated packaging for unrelated purposes. Handle retained material with the same protection as the product and use an authorized disposal or return route. |

## 14. Transport information

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| **DOT / road reference** | Not regulated in the matched road reference. Apply the shipment's destination road requirements. |
| **IMDG** | Not regulated as dangerous goods in the applicable reference. |
| **IATA** | Not regulated as dangerous goods in the applicable reference. |
| **UN number / class / packing group** | Not assigned for the reference material. |
| **Special precautions** | Keep packaging closed, secured and protected against damage; prevent release. |
| **Maritime bulk transport** | Not assessed for bulk shipment under IMO instruments. |
| **Scope** | Transport entries apply to the reference identity, concentration and form described in Section 3. Changes in composition require reassessment. |

## 15. Regulatory information

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| **Classification framework** | GHS/CLP reference classification is given for the material in Section 3. Local worker-protection, labeling, transport, environmental and end-use requirements apply. |
| **Registration / use status** | No supply-specific registration number, market authorization or end-use certification is established by this reference record. |
| **Chemical safety assessment** | No supply-formulation chemical safety assessment is supplied by ZXCHEM in this record. |

## 16. Other information

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| **Revision date** | 2026-10-13; initial ZXCHEM reference safety document, version 2026.1. |
| **Abbreviations** | ADR/RID: road/rail dangerous goods; IMDG: maritime dangerous goods; IATA: air dangerous goods; PG: packing group; LD50/LC50: median lethal dose/concentration; STOT: specific target organ toxicity. |
| **Use of information** | Use together with the grade TDS and a workplace assessment. Concentration, solvent, impurity or physical-form changes require applicable safety information. |
| **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: 2026.1 | Revision date: 2026-10-13