



SAFETY DATA SHEET (SDS / MSDS)

Maleic anhydride | CAS No. 108-31-6 | Revision: 2026-09-22

SECTION 1: Identification

Product identifier: Maleic anhydride

Synonyms: MAe; cis-Butenedioic anhydride; Furan-2,5-dione **Formula:** C₄H₂O₃

CAS No.: 108-31-6 **EC No.:** 203-571-6 **Molecular weight:** 98.06 g/mol

Recommended use: Unsaturated polyester resin, alkyd resins, coatings, surfactants, food acidulant (fumaric acid).

Supplier: Dongying Yuansheng Chemical Co., Ltd, Dongying, Shandong Province, P.R. China.

Emergency telephone: +86-546-XXXXXXX (business hours); for medical emergency contact local poison control centre.

SECTION 2: Hazard(s) identification

GHS classification: Acute Tox. 4 (oral); Skin Irrit. 2; Eye Dam. 1; Skin Sens. 1; Resp. Sens. 1; STOT SE 3; Aquatic Chronic 3.

Signal word: Danger.

Hazard statements: H302 Harmful if swallowed; H315 Causes skin irritation; H317 May cause allergic skin reaction; H318 Causes serious eye damage; H334 May cause allergy or asthma symptoms if inhaled; H335 May cause respiratory irritation.

Precautionary statements: P260 Do not breathe dust; P280 Wear gloves/eye protection/face shield; P305+P351+P338 IF IN EYES rinse; P304+P341 IF inhaled move to fresh air; P342+P311 If asthma symptoms call POISON CENTER.

Additional hazards: Strong respiratory and skin sensitizer (asthma). Reacts with water forming maleic acid. Dust combustible. Corrosive.

SECTION 3: Composition / information on ingredients

Substance. The table below lists the hazardous component. MAe; cis-Butenedioic anhydride; Furan-2,5-dione is the product itself.

Component	CAS No.	EC No.	Concentration (w/w)
Maleic anhydride	108-31-6	203-571-6	Industrial grade (flakes)

SECTION 4: First-aid measures

Inhalation: Move victim to fresh air; keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Seek medical attention immediately.

Skin contact: Take off contaminated clothing immediately. Rinse skin with plenty of water for at least 15 minutes. Seek medical attention immediately.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Seek medical attention immediately.

Ingestion: Rinse mouth. Do NOT induce vomiting. Give water/milk if conscious. Never give anything by mouth to an unconscious person. Seek medical attention immediately.

Most important symptoms/effects: Harmful if swallowed. Causes severe eye damage. May cause asthma/respiratory allergy and skin sensitization.

SECTION 5: Fire-fighting measures

Suitable extinguishing media: Carbon dioxide (CO₂), dry chemical powder, alcohol-resistant foam. Use water spray to cool containers and protect personnel.

Hazards from the substance: Vapours are heavier than air and may travel along the ground to an ignition source. Vapour-air mixtures are explosive. On heating, hazardous decomposition products may be formed.

Advice for fire-fighters: Wear self-contained breathing apparatus (SCBA) and full protective clothing. Do not use a direct water jet (may spread fire). Collect contaminated fire water separately.

SECTION 6: Accidental release measures

Personal precautions: Ensure adequate ventilation. Wear suitable PPE (Section 8). Avoid inhalation and contact with skin/eyes. Remove ignition sources if flammable.

Environmental precautions: Do not allow product to enter drains, surface water, groundwater or soil.

Methods for cleaning up: Ventilate the area. Absorb with inert material (sand, earth, vermiculite) or neutralize as appropriate. Collect in labelled, sealed containers for disposal. Wash remainder with water. Prevent entry into waterways.

SECTION 7: Handling and storage

Handling: Use only in well-ventilated areas. Do not breathe vapour/mist/dust. Wear PPE. Avoid contact with skin, eyes and clothing. Keep away from heat, sparks and open flame; use explosion-proof electrical equipment. Keep away from incompatible materials.

Storage: Store in tightly closed containers in a cool, dry, well-ventilated place. Keep away from direct sunlight and heat. Keep separated from oxidizers, acids/bases and incompatible materials. Use corrosive-resistant equipment.

SECTION 8: Exposure controls / personal protection

Occupational exposure limits: OSHA PEL 0.25 ppm; ACGIH TLV 0.1 ppm (ceiling, sensitizer).

Engineering controls: Use local exhaust ventilation and/or process enclosure. Emergency eye-wash and safety shower must be available close to the work station.

Respiratory protection: Use approved respirator (organic-vapour / ABEK-P3 filter as appropriate; SCBA for high concentrations or enclosed spaces).

Hand protection: Chemical-resistant gloves (neoprene, PVC, nitrile or fluorinated rubber - check permeation data).

Eye protection: Tightly sealed chemical safety goggles; face shield when risk of splashing.

Skin and body protection: Acid/chemical-resistant protective suit, apron and boots.

Hygiene measures: Do not eat, drink or smoke during work. Wash hands before breaks and at end of work. Remove contaminated clothing.

SECTION 9: Physical and chemical properties

Appearance	White crystals/flakes	Odour	Pungent, irritating
Density	1.48 g/cm ³	Melting point	52.8 °C
Boiling point	202 °C	Flash point	102 °C
Solubility in water	Reacts to maleic acid	Vapour pressure	0.2 kPa (25°C)
Molecular weight	98.06 g/mol	Autoignition	477 °C

SECTION 10: Stability and reactivity

Reactivity / chemical stability: Stable under recommended storage and handling conditions.

Incompatible materials: Strong oxidizers, bases, amines, alkalis, water (slow hydrolysis), moisture..

Hazardous reactions: Reacts violently or releases dangerous products with the incompatible materials listed above. Do not mix without assessment.

Conditions to avoid: Heat, direct sunlight, moisture and contact with incompatible materials.

Hazardous decomposition products: Thermal decomposition may release toxic/corrosive fumes (e.g. oxides of carbon, nitrogen, sulfur, hydrogen halides).

SECTION 11: Toxicological information

Acute / chronic toxicity: Harmful if swallowed. Causes severe eye damage. May cause asthma/respiratory allergy and skin sensitization.

Routes of exposure: Inhalation, skin/eye contact, ingestion.

Other: See Section 2 for classification. Data above is indicative; refer to authoritative databases (e.g. ECHA, OECD SIDS) for exact values.

SECTION 12: Ecological information

Ecotoxicity: Harmful to aquatic organisms; hydrolyzes to maleic acid.

Persistence / degradability: See product data. Do not allow undiluted product to reach groundwater, watercourses or sewage.

Other adverse effects: Avoid release to the environment. Dispose of in accordance with local/national regulations.

SECTION 13: Disposal considerations

Product: Dispose of as hazardous waste in accordance with local/national regulations. Do not discharge to sewer. Neutralize/treat as appropriate or hand over to a licensed hazardous-waste contractor.

Contaminated packaging: Dispose of as unused product. Empty containers must be properly drained and handed to an approved disposal/recycling contractor. Do not pressurise, cut, weld or braze used containers.

SECTION 14: Transport information

UN number: UN 2215.

Proper shipping name: MALEIC ANHYDRIDE.

Transport hazard class(es): Class 8.

Packing group: III.

Packaging / labels: Pack in approved containers for the hazard class; apply required hazard labels.

Environmental hazards: Refer to classification (Sections 2, 12). ADR/RID/IMDG/IATA regulations apply.

Special precautions: Ensure containers are tightly closed and upright. Keep away from foodstuffs and incompatible materials.

SECTION 15: Regulatory information

National inventories: Listed in the China Inventory of Existing Chemical Substances (IECSC); EINECS/ELINCS as applicable.

Classification: Classified and labelled according to the UN GHS (Rev. 9) and PRC GB 30000 series / GB 13690; Work Safety Law of the PRC; Hazardous Chemicals Safety Management Regulations.

Chemical Safety Assessment: A Chemical Safety Assessment has not been performed for this product by the supplier.

SECTION 16: Other information

Revision date: 2026-09-22. **Version:** 1.0.

Abbreviations: CAS, EC, GHS, SDS/MSDS, LD50/LC50, PEL/TLV, SCBA, STOT, UN, IECSC, ADR, IMDG, IATA.

Disclaimer: The information in this SDS is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. It is intended only as a guide for safe handling, use, storage, transport and disposal. Users are responsible for applying this information in accordance with their specific conditions and for compliance with all applicable laws and regulations.