

Chemical Safety Technical Data Sheet

Product Name:Oxalic Acid, Dihydrate

Developed in accordance with GB/T 16483 and GB/T 17519

Date of Preparation:September 2025

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Edition : A

Part 1: Identification of Chemicals and Enterprises

Chinese name of the chemical:Glyoxalic acid; Oxalic acid, dihydrate

Chemical name in English:ethanedioic acid; oxalic acid dihydrate

Molecular formula: $C_2H_2O_4 \cdot 2H_2O$ **Relative molecular mass:**126.07

Recommended and restricted uses of the chemical:As a chelating agent, masking agent, precipitating agent, reducing agent, bleaching agent, and dyeing aid; not to be used as a drug, food ingredient, or for household or other general purposes.

Part II Overview of Hazards

Emergency overview:Harmful when ingested or in contact with the skin; causes severe skin burns and eye injuries.

GHS Hazard Category:

Acute toxicity. Oral:Category 4

Acute toxicity. Percutaneous:

Category 4 **Skin corrosion/**

irritation:Category 1C **Severe**

eye injury/eye irritation:Cat-

egory 1

figurative graph :



Warning phrase:Hazard

Hazard Description:Harmful when swallowed or in contact with the skin; can cause severe skin burns and eye injuries.

Protection Explanation:

【 preventive measure 】

- Avoid contact with eyes and skin; thoroughly rinse after use.
- No eating, drinking, or smoking is permitted in the workplace.
- Wear protective gloves, protective clothing, protective goggles, and a face shield.

[Accident Response]

- For inhalation: If dyspnea occurs, move the patient to an area with fresh air, have them rest, and maintain a position that facilitates breathing.
- Skin contact: Immediately remove all contaminated clothing. Wash the affected area thoroughly with ample soap and water. Seek medical attention if discomfort occurs. Contaminated clothing must be washed before reuse.
- Eye contact: Rinse carefully with water for several minutes. If discomfort occurs, seek medical attention.
- Administration: Rinse the mouth; do not induce vomiting. Seek medical attention if concerned.

【 safe storage 】

- Store in a well-ventilated area. Keep the container tightly closed.

[Disposal of Waste]

- This product, its contents, and the container shall be disposed of in accordance with national and local regulations.

Physical and chemical hazards:No data available.

Health hazards:Harmful when swallowed or in contact with the skin; can cause severe skin burns and eye injuries.

Environmental hazards:No data available.

Part III: Composition/Composition Information

√matter		Mixture
Component	Concentration	CAS No.
Oxalic acid, dihydrate	≥96 0%	6153-56-6

Part IV Emergency Management Measures

Inhalation:Immediately remove the individual from the area to fresh air. Keep the airway clear. If breathing is difficult, administer oxygen. In case of respiratory or cardiac arrest, perform cardiopulmonary resuscitation (CPR) immediately. Seek medical attention.

Skin contact:Immediately remove contaminated clothing and rinse thoroughly with running water. Seek medical attention.

Eye contact:Immediately open the eyelids and rinse thoroughly with running water or saline solution. Seek medical attention.

Ingestion:Rinse mouth and drink water. Seek medical attention.

Advice for rescuers:Use personal protective equipment as needed.

Special note for physicians:Provide symptomatic treatment.

Part V Fire Safety Measures

Fire extinguishing agents:Use mist water, carbon dioxide, or sand to extinguish fires.

Special risk:No data available.

Fire suppression precautions and protective measures:Firefighters must wear respirators and full-body fire-resistant/anti-toxic clothing, and approach the fire from upwind. Move containers to an open area whenever possible. Spray water to keep containers cool until the fire is fully extinguished. Evacuate immediately if the container suddenly emits abnormal sounds or exhibits unusual behavior.

Part VI: Emergency Response to Leaks

Protective measures, protective equipment, and emergency response procedures for personnel:Isolate the contaminated leakage area and restrict access. Emergency responders are advised to wear dust masks, acid/alkali-resistant clothing, and rubber gloves. Do not handle ruptured containers or leaked materials before wearing appropriate protective clothing. Efforts should be made to cut off the source of the leak whenever possible.

Environmental protection measures:Prevent leaks from entering water bodies or sewers.

Methods for containing, cleaning up leaked chemicals and the disposal materials used:Collect the spill using a clean shovel and place it in a clean, dry container with a loose lid; move the container away from the spill area.

Part VII: Handling, Storage and Disposal

Operating Precautions:Perform operations in a sealed environment with local exhaust ventilation. Operators must undergo specialized training and strictly adhere to operating procedures. It is recommended that operators wear a head-mounted electric air-supplied filtering respirator, acid/alkali-resistant clothing, and rubber gloves. Prevent dust generation. Handle with care during transportation to avoid damage to packaging or containers. Equip with leakage emergency response equipment. Empty containers may still contain hazardous residues.

Storage precautions:Store in a dry, well-ventilated location. Keep the packaging sealed. Store separately from food-grade chemicals; avoid mixing. The storage area should be equipped with appropriate materials to contain spills.

Part VIII Contact Control/Personal Protection

Occupational exposure limit:No data available.

Biological contact limit:No data available.

Monitoring method:No data available.

Process Control:Hermetically sealed operation with local exhaust ventilation. Safety shower and eye-wash facilities provided.

Personal Protective Equipment:

Respiratory protection:When airborne dust concentrations exceed permissible limits, a self-suction filtering respirator must be worn. During emergency rescue or evacuation operations, an air respirator should be used.

Eye protection:Wear chemical safety goggles.

Skin and body protection:Wear acid-and alkali-resistant clothing.

Hand protection:Wear rubber gloves.

Part IX: Physical and Chemical Properties

Appearance and characteristics:White powder or crystals.

pH:No data

Melting point (°C):101–106

Boiling point (°C):No data

Relative vapor density (air = 1):No data

Combustion heat (kJ/mol):No data

Critical pressure (MPa):No data

Flash point (°C):No data available

Lower explosive limit (%):No data

Decomposition temperature (°C):No data available

Solubility:Soluble in water.

Relative Density (water = 1):No data

Saturation vapor pressure (kPa):No data

Critical temperature (°C):No data

Octanol/water partition coefficient:No data

Natural combustion temperature (°C):No data available

Explosion Limit (%):No data

Viscosity (mPa·s):No data available

Part 10: Stability and Reactivity

Stability:Stable.

Adverse reactions:No data available.

Conditions for avoiding contact:No information available.

Contraindications:No information available.

Hazardous decomposition products:No data available.

Part XI Toxicological Information

Acute toxicity:No data available.

Skin irritation or corrosion:

non-availe 。

Eye irritation or corrosion:

non-availe 。

Respiratory or skin allergy:

non-availe 。

Mutability of germ cells:

non-availe 。

Carcinogenicity:No data available.

Reproductive toxicity:No data available.

Specific target organ system toxicity – single exposure:No data available.

Specific target organ system toxicity – repeated exposure:No data available.

Inhalation hazards:No data available.

Part XII: Ecological Information

Ecotoxicity:No data available.

Durability and Degradability:

Biodegradability: No data available.

Non-biodegradability: No data available.

Potential bioaccumulation:No data available.

Mobility in soil:No data available.

Part 13: Waste Disposal

Waste chemicals:Hand over remaining and non-recyclable products to a licensed company for disposal.

Contaminated packaging:Return the container to the manufacturer or dispose of it in accordance with national and local regulations.

Disposal precautions:Refer to relevant national and local regulations before disposal.

Part 14: Transportation Information

United Nations dangerous goods number (UN number):No information available

Name of Transport by the United Nations:Non-hazardous goods

UN hazard class:No information

Packaging Category:No information

Packaging Logo:No information

Marine pollutants:No

Transportation Precautions:Before transportation, verify that the packaging container is intact and sealed. During transit, ensure the container remains leak-proof, stable, protected from collapse or damage. Strictly prohibit mixing with food or food additives. Transport vehicles must be equipped with

appropriate types and quantities of firefighting equipment and leakage emergency response devices. Protect the containers from direct sunlight, rain, and high temperatures during transport. For road transport, follow designated routes as required.

Part 15: Regulatory Information

The following laws, regulations, rules, and standards contain corresponding provisions for the management of this chemical substance.

Law of the People's Republic of China on the Prevention and Treatment of Occupational Diseases:Classification and catalog of occupational diseases: Not listed.

Regulations on the Safety Management of Hazardous Chemicals:List of hazardous chemicals: Not included. List of explosive-prone hazardous chemicals: Not included. List of key hazardous chemicals under supervision: Not included. GB18218-2018 "Identification of Major Hazard Sources for Hazardous Chemicals" (Table 1): Not included.

Regulations on Labor Protection in Workplaces Where Toxic Substances Are Used:List of highly toxic substances: Not included.

Regulations on the Management of Chemicals Susceptible to Drug Manufacturing:Classification and list of types of chemicals susceptible to drug manufacturing: Not included.

International Conventions:Stockholm Convention: Not included; Rotterdam Convention: Not included; Montreal Protocol: Not included.

Part 16: Other Information

Writing and revision information:This is the first version.

References:Safety Culture Network

Disclaimer:The information in this SDS applies solely to the specified product. Unless otherwise stated, it does not apply to mixtures of this product with other substances. This SDS provides safety information only for properly trained users of the product. Users must independently assess the suitability of this SDS under specific usage conditions. The authors of this SDS shall not be liable for any injuries resulting from its use in exceptional circumstances.