Chemical Safety Technical Data Sheet

Product Name: Tetrasodium ethylenediaminetetraacetate, tetrahydrate

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

Revision Date: December 2025

SDS Number: ZLJL-1161

First published: July 8, 2024

Edition： B

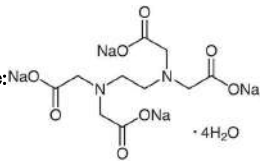
Part 1: Identification of Chemicals and Enterprises

Chemical name in Chinese: Tetrasodium ethylenediaminetetraacetate, tetrahydrate; EDTA tetranatrium salt

Chemical name in English:ethylenediaminetetraacetic acid tetrasodium salt tetrahydrate

Molecular formula:$C_{10}H_{12}N_2Na_4O_8 \cdot 4H_2O$ **Relative molecular mass:**452.23

Structure:



Recommended and restricted uses of the chemical: As a complexing agent, dyeing aid, washing aid, etc.

Part II Overview of Hazards

Emergency overview: Causes harmful ingestion and severe ocular injury.

GHS Hazard Category:

Acute toxicity – Oral: Category 4

Severe eye injury/eye irritation: Category 1

Tag Elements:

figurative graph：

Warning phrase: Hazard

Hazard Description: Harmful when swallowed. Can cause severe eye injury.

【 preventive measure 】

·Avoid contact with eyes; 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]

·Eye contact: Rinse carefully with water for several minutes. If contact lenses are worn and can be easily removed, remove them and continue rinsing. If discomfort occurs, immediately contact the poison control center or seek medical attention.

·Administration: Rinse the mouth with water. If discomfort occurs, immediately contact the poison control center or seek medical attention.

【 safe storage 】

·non-avaible 。

[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

Health hazards: Harmful to swallowing; causes severe eye injuries.

Environmental hazards: No data available.

Part III: Composition/Composition Information

√matter Mixture

Component	Concentration	CAS No.
Tetrasodium ethylenediaminetetraacetate, tetrahydrate	≥99 0%	13235-36-4

Part IV Emergency Management Measures

Inhalation: Immediately remove the individual from the exposure 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 the skin thoroughly with plenty of running water. Seek medical attention if discomfort occurs. Contaminated clothing must be washed before reuse.

Eye contact: Immediately open the eyelids and rinse thoroughly with plenty of running water or normal saline. If contact lenses are worn and can be easily removed, remove them and continue rinsing. Seek medical attention if discomfort occurs.

Ingestion: Rinse the mouth with 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 water mist, alcohol-resistant foam, sand, dry powder, or carbon dioxide to extinguish the fire.

Special risk: No data available.

Fire suppression precautions and protective measures: Firefighters must wear respirators and full-body firefighting suits, approaching the fire from upwind directions. Spray water to cool containers and move them to an open area whenever possible. If a container suddenly emits abnormal sounds or exhibits unusual behavior, evacuate immediately.

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, chemical-resistant protective clothing, and rubber gloves. Do not handle ruptured containers or leaked substances before wearing appropriate protective gear. Try to cut off the source of the leak whenever possible.

Environmental protection measures: Prevent leaks from entering water bodies, sewers, basements, or confined spaces.

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

Part VII: Handling, Storage and Disposal

Operating Precautions: Operators must undergo specialized training and strictly adhere to operating procedures. It is recommended that operators wear self-suction filtering dust masks, chemical safety goggles, chemical protective clothing, and rubber gloves. Keep away from sources of ignition and heat; smoking is strictly prohibited in the workplace. Prevent dust generation. Avoid contact with skin and eyes. Avoid exposure to oxidizers. Handle with care during transportation to prevent damage to packaging and containers. Equip with appropriate types and quantities of fire extinguishers and leakage emergency response equipment.

Storage Precautions: Store in a well-ventilated warehouse. Keep tightly sealed. Keep away from sources of ignition and heat. Store separately from oxidizers and food-grade chemicals; avoid mixing. Provide adequate fire-fighting equipment in appropriate quantities. The storage area should be equipped with suitable materials to contain leaks.

Part VIII Contact Control/Personal Protection

Occupational exposure limits: China: No standards established.

United States (ACGIH): No standards have been established.

Biological contact limit: No standard established.

Monitoring methods: Methods for determining toxic substances in the air: No standards have been established. Methods for biological monitoring tests: No standards have been established.

Engineering controls: Provide safe shower and eye-wash facilities.

Personal Protective Equipment:

Respiratory protection: When airborne dust concentrations exceed permissible limits, a filtered 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 chemical protective clothing.

Hand protection: Wear rubber gloves.

Part IX: Physical and Chemical Properties

Appearance and characteristics: White crystalline powder, slightly odorous or odorless.

pH: No data **Melting point (°C):>**300

Bulb point (°C): No data available

Relative Density (water = 1): No data

Relative vapor density (air = 1): No data

Saturation vapor pressure (kPa): No data

Combustion heat (kJ/mol): No data

Critical temperature (°C): No data

Critical pressure (MPa): No data

Octanol/water partition coefficient: No data

Flash point (°C): No data available

Self-ignition temperature (°C): No data

Lower explosive limit (%): No data

Explosion Limit (%): No data

Decomposition temperature (°C): No data

Viscosity (mPa·s): No data

Dissolution: Easily soluble in water, slightly soluble in ethanol, insoluble in benzene and chloroform.

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-avaible 。

Eye irritation or corrosion: non-avaible 。

Respiratory or skin allergy: non-avaible 。

Mutability of germ cells: non-avaible 。

Carcinogenicity:IARC: No component in this product with a concentration of ≥0.1% has been identified by the IARC as a probable or definite human carcinogen.

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: Disposal shall comply 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

United Nations Transport Name: No information available

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 properly sealed. During transit, ensure the container remains leak-proof, stable, free from collapse or damage. Strictly prohibit mixing with oxidizers or food-grade chemicals during transport. Protect the container from direct sunlight, rain, and high temperatures. When stopping en route, keep it away from sources of ignition, heat, and high-temperature areas. Transport vehicles must be equipped with appropriate types and quantities of firefighting equipment and leakage emergency response devices. 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:

Changes in this version: Compared to the previous version, new sections on molecular formulas, relative molecular masses, and structural formulas have been added; corresponding content has been incorporated in accordance with the "Comprehensive Book of Safety Technology for Hazardous Chemicals"; and the order of certain sections has been adjusted.

Revision notes: Updated every 5 years or when new relevant national laws and regulations are enacted.

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.