

Technical Data Sheet (TDS)

1. Product Overview

- Product Name:Thioglycolic Acid
- English Name:Thioglycolic Acid
- CAS Number:68-11-1
- Formula:C₂H₄O₂S
- Molecular Weight:92.12 g/mol
- Product Characteristics:High-purity pale yellow liquid, strong thiol reactivity. Soluble in water and organic solvents, strong acidity. Used as chelating agent, hair waving agent, and chemical intermediate.

2. Technical Specifications

Item	Specification
Appearance	Colorless to pale yellow liquid
Purity (C ₂ H ₄ O ₂ S)	≥ 98.0%
Boiling Point	120-124°C (13 kPa)
Melting Point	-16°C
Water Content	≤ 0.5%
pH Value (1% solution, 25°C)	1.0-2.0
Heavy Metals (Pb)	≤ 0.001%
Iron (Fe)	≤ 0.0005%
Flash Point (Closed Cup)	74°C
Density (25°C)	1.325-1.335 g/cm ³
Solubility (20°C)	≥ 95 g/100 mL (water)

3. Product Advantages

- High purity and strong reactivity for chelation and synthesis.
- Excellent chelating ability for heavy metals (Fe, Cu, Pb).
- Soluble in water and organic solvents for versatile application.
- Reliable quality with strict batch testing.

4. Application Fields

- Cosmetics:Hair waving agents, depilatories (breaks disulfide bonds in hair/skin).
- Metalworking:Chelating agent for metal surface treatment, corrosion inhibitor.
- Chemical Synthesis:Intermediate for pharmaceuticals, pesticides, polymers.
- Textile Industry:Dyeing auxiliary, wool finishing.
- Other:Electroplating, chemical analysis reagent.

5. Usage Methods

- Cosmetics:Add 5-15% (mass ratio) to hair waving formulations; adjust pH to 8-9.
- Metal Chelation:Add 100-500 ppm to metalworking fluids; stir evenly.



NEWAY SINOPHC TECH. LIMITED

ADD:RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE.
Email:marketing01@newayphc.com; Phone:+86-021-50350029 <https://www.newayphc.com>

- Chemical Synthesis:Use in specified molar ratios; react at 0-50°C.
- Optimal Conditions:Apply at 15-35°C; avoid strong oxidizing agents and metals.

6. Packaging & Storage

- Packaging:10 kg HDPE drums, 25 kg HDPE drums, 200 kg HDPE drums.
- Storage:Cool, dry, well-ventilated warehouse ($\leq 30^{\circ}\text{C}$); keep sealed; away from oxidizing agents, acids, metals.
- Shelf Life:18 months (unopened).
- Transportation:Handle as UN2966; avoid collision, moisture, direct sunlight.

7. Safety & Protection

- Wear chemical-resistant suit, nitrile gloves, chemical splash goggles, face shield, and respirator during handling.
- Operate in well-ventilated area; avoid skin/eye contact and inhalation.
- Rinse immediately with plenty of water if contact occurs; seek medical attention.

8. Quality Assurance

- Manufactured under ISO 9001 quality management system.
- Each batch accompanied by COA.
- Provide technical support for application and formulation.

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