

Safety Data Sheet (MSDS)

(According to GB/T 16483, GB/T 17519, and GHS Standards)

SECTION 1: Identification

1.1 Product Identifiers

- Product Name: Ethylene Oxide Solution (10% in Ethanol)
- Product Number:EO-20260404
- Brand:TECHPURE
- CAS-No.:75-21-8
- Synonyms: Oxirane Solution; Ethylene Oxide in Ethanol

1.2 Details of the supplier of the safety data sheet

- Company : NEWAY SINOPHC TECH. LIMITED
- RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI)PILOT FREE TRADE ZONE.
- Telephone : +86-021-50350029
- Fax : +86-021-50350029

1.3 Emergency telephone

Emergency Phone # : +86-021-50350029
(CHEMTREC)

1.4 Uses & Restrictions

- Identified Uses: Chemical synthesis, sterilization, laboratory reagent.
- Uses Advised Against: Food contact, medicinal purposes, unventilated enclosed space use.

SECTION 2: Hazards Identification

2.1 GHS Classification

- Flammable liquids (Category 1)
- Acute toxicity - Inhalation (Category 2)
- Skin irritation (Category 2)
- Eye irritation (Category 2)
- Carcinogenicity (Category 1)
- Aquatic toxicity (Category 1)

2.2 GHS Label Elements

- Hazard Pictogram: Flame; Skull and crossbones; Irritant; Carcinogen; Environment
- Signal Word: Danger
- Hazard Statements: H224 (Extremely flammable liquid and vapor); H331 (Toxic if inhaled); H315 (Causes skin irritation); H319 (Causes serious eye irritation); H350 (May cause cancer); H400 (Very toxic to aquatic life)

- Precautionary Statements: P210 (Keep away from heat/sparks); P260 (Do not breathe vapor); P280 (Wear protective gloves/eye/respiratory protection); P304+P340 (If inhaled: Remove to fresh air)

SECTION 3: Composition/Information on Ingredients

- Substance / Mixture: Mixture
- Active Component: Ethylene Oxide (CAS 775-21-8)
- Concentration: 10.0 ± 0.5%
- Solvent: Ethanol (CAS 74-93-1) (89.0-91.0%)
- Impurities: ≤ 0.5% (Water, ethylene glycol)

SECTION 4: First Aid Measures

- Inhaled: Move to fresh air; give oxygen if needed; seek emergency medical attention.
- Skin Contact: Rinse with running water for 15 minutes; remove contaminated clothing.
- Eye Contact: Rinse with plenty of water for 15 minutes; seek emergency medical attention.
- Swallowed: Do not induce vomiting; rinse mouth with water; seek immediate medical attention.

SECTION 5: Firefighting Measures

- Suitable Extinguishing Media: Dry powder, CO₂, foam, water spray.
- Special Hazards: Extremely flammable vapor; toxic fumes (CO) when burned; explosive at high concentration.
- Advice for Firefighters: Wear self-contained breathing apparatus and full protective clothing.

SECTION 6: Accidental Release Measures

- Personal Precautions: Evacuate non-essential personnel; wear full PPE; eliminate ignition sources.
- Environmental Precautions: Prevent entry into drains/watercourses; use absorbents to contain contamination.
- Clean-Up Methods: Small spills: Absorb with inert materials; large spills: Contain and transfer to sealed containers.

SECTION 7: Handling and Storage

- Handling: Operate in well-ventilated areas with explosion-proof equipment; use anti-static tools.
- Storage: Cool, dark, well-ventilated warehouse (≤ 20°C); sealed, under inert atmosphere.
- Incompatibilities: Strong oxidizers, acids, alkalis.

SECTION 8: Exposure Controls/Personal Protection

- PPE: Chemical safety goggles/face shield; nitrile rubber gloves; organic vapor respirator (P100).
- Exposure Limits: TWA (8h): 1 ppm (OSHA); STEL (15min): 5 ppm (OSHA); IARC Group 1.

SECTION 9: Physical and Chemical Properties

- Physical State: Liquid; Color: Colorless; Odor: Faint sweet



NEWAY SINOPHC TECH. LIMITED

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

- Melting Point: -111.3°C (Ethylene oxide); Boiling Point: 75-80°C (Solution)
- Flash Point: 13°C; Density (20°C): 0.797 g/cm³
- Viscosity (20°C): 1.0 mPa·s; Vapor Pressure (25°C): 18 kPa
- Explosive Limits: 3.0-100% (v/v); Autoignition Temperature: 429°C

SECTION 10: Stability and Reactivity

- Stability: Stable under inert atmosphere; polymerizes at high temperature.
- Hazardous Reactions: Reacts violently with strong oxidizers; polymerizes with acids.

SECTION 11: Toxicological Information

- Acute Toxicity: Inhalation (Rat, LC₅₀): 800 ppm (4h); Oral (Rat, LD₅₀): 300 mg/kg
- Skin/Eye Irritation: Mild skin irritation; serious eye irritation.
- Chronic Toxicity: Carcinogenic (IARC 1); long-term exposure may cause nervous system damage.

SECTION 12: Ecological Information

- Aquatic Toxicity: Fish (Rainbow Trout, LC₅₀): 80 mg/L (96h); Daphnia (EC₅₀): 120 mg/L (48h)
- Biodegradability: Moderately biodegradable (BOD₅/COD = 0.3-0.4)

SECTION 13: Disposal Considerations

- Product Waste: Dispose as hazardous waste; incinerate in approved facilities.
- Packaging Waste: Rinse with solvent; dispose as hazardous waste or recycle.

SECTION 14: Transport Information

- UN Number: 1040 (Ethylene oxide-based)
- UN Proper Shipping Name: ETHYLENE OXIDE, SOLUTION IN ALCOHOLS
- Transport Hazard Class: 2.1 (Flammable gases); Packaging Group: I
- Marine Pollutant: Yes
- Transport Precautions: Avoid direct sunlight, high temperature, and collision.

SECTION 15: Regulatory Information

- National Regulations: Hazardous Chemical Safety Management Regulation; Environmental Protection Law.
- International Regulations: GHS (Rev. 9); REACH (EU, listed); TSCA (US, listed); IMDG Code; IARC Group 1.

SECTION 16: Other Information

- Revision Date: 04 APR 2026
- Disclaimer: This MSDS is based on current data; supplier not liable for improper use.