

Tetraethylene Glycol (TTEG)

PRODUCT DESCRIPTION

Tetraethylene Glycol is a clear, water-white polyether diol with the molecular formula $C_8H_{18}O_5$ (CAS 112-60-7). As the highest molecular weight member of the commercially produced ethylene glycol oligomer series, it combines the highest boiling point in the family with very low vapor pressure and moderate viscosity.

TTEG is completely water soluble and miscible with many organic solvents, while remaining immiscible with oils, aromatics, and aliphatic hydrocarbons. Its terminal hydroxyl groups undergo conventional alcohol chemistry, converting readily to esters, ethers, amines, and other derivatives. That combination makes TTEG a versatile plasticizer, solvent, processing aid, and chemical intermediate.

BENEFITS

Highest Boiling Point in the Series

A boiling range above 329°C (624°F) supports higher-temperature operation with minimal volatility loss.

Low Volatility

Vapor pressure below 0.01 mmHg at 20°C keeps evaporative losses low in open and heated systems.

Excellent Solvency

Complete water solubility plus broad organic solvent compatibility gives strong dissolution and coupling performance.

Chemical Versatility

Terminal hydroxyl groups enable derivatization to esters, ethers, amines, and other functional compounds.

Low Toxicity Profile

Low toxicity and low volatility, with documented antimicrobial activity when aerosolized.

APPLICATIONS

Plasticizers & Resins

Plasticizer • polyester resin production • unsaturated polyester resins • good plasticizing properties

Solvents & Coatings

Nitrocellulose solvent • lacquers and coatings • ink manufacturing • dye production

Functional Fluids

Hydraulic fluids • heat transfer fluids • lubricant formulations • textile lubricant formulations

Chemical Intermediate

Specialty chemical manufacturing • coupling agent • tetraethylene glycol methacrylate synthesis • surface modification for protein-resistant coatings

Process & Separation

High-temperature reactions • separation processes • hydrocarbon purification • gas processing and natural gas dehydration

AVAILABILITY

55
GALLON DRUMS

275
GALLON TOTES

Bulk
DELIVERIES

Samples available on request. Contact us for current lead times and volume pricing.

(800) 489-2306
www.chemgroupus.com

 PRODUCT DATA

PROPERTY	TEST METHOD	VALUE
Appearance	SDS CG-057	Clear, water white liquid
Odor	SDS CG-057	Anti-freeze
Chemical Name	IUPAC	2-[2-[2-(2-Hydroxyethoxy)ethoxy]ethoxy]ethanol
Synonyms	–	Tetraglycol · TTEG · T4EG · TetraEG
CAS Number	SDS CG-057	112-60-7
Molecular Formula	–	C ₈ H ₁₈ O ₅
Molecular Weight	–	194.23 g/mol
Composition	SDS CG-057	90–100% tetraethylene glycol · 0–5% triethylene glycol
Purity	–	99% minimum (typical)
pH	SDS CG-025	8.8
Relative Density (water = 1)	SDS CG-025	1.1
Boiling Point / Range	SDS CG-025	>329°C (>624°F)
Melting / Freezing Point	SDS CG-025	–4°C (25°F)
Flash Point	SDS CG-025	202°C (396°F)
Autoignition Temperature	SDS CG-025	358°C (676°F)
Vapor Pressure @ 20°C	SDS CG-025	< 0.01 mmHg
Vapor Density (Air = 1)	SDS CG-025	6.7
Water Solubility	SDS CG-025	100%
TSCA Status	SDS CG-025	Listed, active
HS Code	–	2909 49 80
Transport Classification	SDS CG-057	Not regulated: DOT · IATA · IMDG

 HANDLING & STORAGE

Keep containers tightly closed in a dry, cool, well-ventilated place. TTEG is hygroscopic and will absorb atmospheric moisture, so sealed storage protects product quality.

Incompatible with strong oxidizing agents, strong acids, and strong bases. TTEG may attack some plastics; verify material compatibility before use in plastic systems.

 SAFETY

This product does not meet the hazardous criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200). It is combustible when preheated; keep away from ignition sources.

May cause temporary eye irritation and, on prolonged contact, skin redness. Use safety goggles and impervious protective clothing.

Consult the current Safety Data Sheet for complete hazard information, exposure limits, first aid measures, and handling precautions prior to use.

The information contained herein is offered in good faith and is believed to be accurate. No warranty, express or implied, is made regarding results to be obtained from its use. The user is responsible for determining suitability for their application and for compliance with all applicable regulations.

(800) 489-2306
www.chemgroupus.com