



## TECHNICAL DATA SHEET

**Product Name:** Diethylene Glycol (DEG)

**CAS No.:** 111-46-6

**EINECS No.:** 203-872-2

**EC Index No.:** 603-140-00-6

### 1. Product Identification

**Chemical Name:** Diethylene Glycol

**Molecular Formula:** C<sub>4</sub>H<sub>10</sub>O<sub>3</sub>

**Molecular Weight:** 106.12 g/mol

**Synonyms:** DEG

### 2. Physical & Chemical Properties

Parameter	Specification
Appearance	Colorless, clear, hygroscopic liquid
Odor	Odorless or faint sweetish
Purity (DEG content)	≥ 99.0%
Water Content	≤ 0.1%
Color (APHA)	≤ 15
Density (20 °C)	1.118 g/cm <sup>3</sup>
Boiling Point	245 °C
Melting Point	-10.45 °C
Flash Point (Closed Cup)	143 °C
Solubility	Miscible with water, alcohols, acetone

### 3. Stability and Reactivity

**Stability:** Stable under normal temperature and pressure.

**Incompatible Materials:** Strong oxidizing agents, strong acids.

**Hazardous Decomposition:** Carbon oxides may form upon combustion.

### 4. Toxicological Information

**Acute Toxicity (Oral, Rat):** LD<sub>50</sub> = 12,565 mg/kg

**Acute Toxicity (Dermal, Rabbit):** LD<sub>50</sub> = 11,890 mg/kg

**Skin/Eye Contact:** May cause mild irritation.

**Long-term exposure:** May cause kidney and liver effects.

### 5. Applications

Used as a **solvent** in resins, oils, dyes, and cellulose esters.

Intermediate in the production of **unsaturated polyester resins** and **polyurethane foams**.

Used in **plasticizers**, **lubricants**, and **brake fluids**.

Functions as a **humectant** in tobacco, inks, and glues.

Component in **cosmetics and personal care products** (regulated use due to toxicity concerns).

## 6. Packaging & Storage

**Packaging:** 230 kg drums, IBC tanks, or bulk ISO tanks.

**Storage:** Store in a cool, dry, well-ventilated area away from heat and strong oxidizers. Keep container tightly closed.

**Shelf Life:** 12 months under recommended storage conditions.

