

Technical Data Sheet (TDS)

1. Product Overview

- Product Name: Diethyl Ether (Ethyl Ether)
- English Name: Diethyl Ether; Ethyl Ether
- CAS Number: 60-29-7
- Formula: C₄H₁₀ O
- Molecular Weight: 74.12 g/mol
- Product Characteristics: Colorless clear liquid with a characteristic sweet odor. Highly volatile aliphatic ether solvent with excellent solubility for organic compounds. Chemically stable under normal conditions, extremely flammable, and moderately toxic.

2. Technical Specifications

Item	Specification
Appearance	Colorless clear liquid
Purity (GC)	≥ 99.0%
Water Content	≤ 0.05%
Density (20°C)	0.713-0.715 g/cm ³
Boiling Range	34.5-35.5°C
Flash Point (Closed Cup)	-45°C
Viscosity (20°C)	0.23 mPa s
Non-Volatile Residue	≤ 0.005%
Heavy Metals (Pb)	≤ 0.5 ppm
Heavy Metals (As)	≤ 0.1 ppm
Peroxides (as H ₂ O ₂)	≤ 0.001%

3. Product Advantages

1. High Purity: Low impurity and peroxide content ensure safe use in sensitive processes.
2. Excellent Solvency: Dissolves oils, waxes, resins, and organic intermediates, ideal for extraction.
3. High Volatility: Fast evaporation rate, leaving no residue in cleaning and formulation.
4. Chemical Compatibility: Compatible with most organic solvents and materials.

4. Application Fields

- Laboratory Research: Analytical reagent, reaction solvent, and extraction agent (e.g., lipid extraction).
- Industrial Solvent: Coatings, adhesives, and rubber processing.
- Pharmaceutical Industry: Extraction of active pharmaceutical ingredients.
- Industrial Cleaning: Precision parts and electronic component cleaning (low-residue requirement).

5. Usage Methods

- Dosage: Adjust according to application (50-100% concentration; avoid dilution with water).

- Application: Use in closed systems for extraction/synthesis; employ spray or immersion for cleaning.
- Optimal Conditions: Operate at 10-25°C in well-ventilated areas; strictly eliminate ignition sources.

6. Packaging & Storage

- Packaging Specifications: 1L HDPE bottles, 5L HDPE cans, 20L steel drums (UN-approved).
- Storage Conditions: Store in cool, dry, well-ventilated warehouses (temperature $\leq 25^{\circ}\text{C}$). Keep sealed, away from heat, sparks, and oxidizing agents. Add stabilizers to prevent peroxide formation.
- Shelf Life: 6 months (unopened, under specified storage conditions; test peroxide content before use).
- Transportation: Classified as flammable hazardous goods; transport per relevant regulations.

7. Safety & Protection

- Extremely flammable: No smoking near storage/use areas; prohibit open flames and static electricity.
- Wear full PPE: Chemical safety goggles, nitrile rubber gloves, anti-static clothing, and organic vapor respirator.
- Avoid inhalation and skin contact; store with peroxide inhibitors.
- In case of exposure, follow first aid measures in MSDS and seek medical attention promptly.

8. Quality Assurance

- Manufactured under ISO 9001 quality management system.
- Each batch is accompanied by a COA for compliance verification.
- Provide technical support for safe application and peroxide control.