

Technical Data Sheet (TDS)

1. Product Overview

- Product Name: Ethanol (Ethyl Alcohol)
- English Name: Ethanol; Ethyl Alcohol
- CAS Number: 64-17-5
- Formula: C_2H_5OH
- Molecular Weight: 46.07 g/mol
- Product Characteristics: Colorless clear liquid with a characteristic alcoholic odor. High-purity aliphatic alcohol solvent with excellent solubility for polar and non-polar compounds. Chemically stable under normal conditions, highly flammable, and moderately toxic.

2. Technical Specifications

Item	Specification
Appearance	Colorless clear liquid
Purity (GC)	$\geq 99.5\%$
Water Content	$\leq 0.2\%$
Density (20°C)	0.789-0.791 g/cm ³
Boiling Range	78.0-78.5°C
Flash Point (Closed Cup)	13°C
Viscosity (20°C)	1.20 mPa s
Non-Volatile Residue	$\leq 0.005\%$
Heavy Metals (Pb)	≤ 0.5 ppm
Heavy Metals (As)	≤ 0.1 ppm
Acidity (as CH_3COOH)	$\leq 0.001\%$

3. Product Advantages

1. High Purity: Low impurity content ensures stable performance in multiple application scenarios.
2. Versatile Solvency: Dissolves most organic/inorganic substances, suitable for industrial, pharmaceutical, and laboratory use.
3. Controlled Volatility: Balanced evaporation rate for cleaning, synthesis, and formulation applications.
4. Wide Compatibility: Compatible with most solvents and materials, low corrosion risk.

4. Application Fields

- Chemical Synthesis: Precursor for ethylene oxide, ethyl acetate, and pharmaceutical intermediates.
- Industrial Solvent: Coatings, adhesives, inks, and cosmetics formulation.
- Laboratory Research: Analytical reagent, reaction solvent, and calibration standard.
- Daily Use: Disinfectant (high-concentration), fuel additive, and food-grade solvent.

5. Usage Methods

- Dosage: Adjust according to application (10-100% concentration; dilute with water or compatible solvents).
- Application: Use in closed systems for synthesis; spray or wipe for disinfection/cleaning (ensure ventilation).
- Optimal Conditions: Operate at 15-25°C in well-ventilated areas; strictly avoid ignition sources.

6. Packaging & Storage

- Packaging Specifications: 5L HDPE cans, 20L steel drums, 200L steel drums, 1000L IBC totes (UN-approved).
- Storage Conditions: Store in cool, dry, well-ventilated warehouses (temperature $\leq 30^{\circ}\text{C}$). Keep sealed, away from heat, sparks, and oxidizing agents.
- Shelf Life: 12 months (unopened, under specified storage conditions).
- Transportation: Classified as flammable hazardous goods; transport per relevant regulations.

7. Safety & Protection

- Highly flammable: No smoking near storage/use areas; prohibit open flames.
- Wear appropriate PPE: Chemical safety goggles, nitrile rubber gloves, and anti-static clothing.
- Avoid excessive inhalation or ingestion; ensure local exhaust ventilation.
- 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 process optimization.