

## Technical Data Sheet (TDS)

### 1. Product Overview

- Product Name: Ethyl Bromide (Bromoethane)
- English Name: Ethyl Bromide; Bromoethane
- CAS Number:74-96-4
- Formula:C<sub>2</sub>H<sub>5</sub> Br
- Molecular Weight:108.97 g/mol
- Product Characteristics: Colorless clear liquid with a sweet ether-like odor. Highly reactive alkyl halide with excellent solubility. Highly flammable, toxic, and slightly soluble in water. Suitable for chemical synthesis, pharmaceuticals, and laboratory research.

### 2. Technical Specifications

Item	Specification
Appearance	Colorless clear liquid
Purity (GC)	≥ 99.0%
Water Content	≤ 0.1%
Density (20°C)	1.460-1.462 g/cm <sup>3</sup>
Boiling Range	37-39°C
Refractive Index (20°C)	1.423-1.425
Flash Point (Closed Cup)	-23°C
Viscosity (20°C)	0.43 mPa·s
Heavy Metals (Pb)	≤ 0.5 ppm
Heavy Metals (As)	≤ 0.1 ppm
Non-Volatile Residue	≤ 0.005%
Explosive Limits (v/v)	6.7-11.3%
Water Solubility	Slightly soluble (9.1 g/L at 25°C)

### 3. Product Advantages

1. High Purity: Low impurity content ensures stable reactivity in synthesis.
2. Strong Alkylating Ability: Ideal for ethylation reactions and organic synthesis.
3. Excellent Solvency: Dissolves organic compounds, suitable for extraction and solvents.
4. Versatile Application: Key intermediate for pharmaceuticals, pesticides, and dyes.

### 4. Application Fields

- Chemical Synthesis: Precursor for ethyl derivatives, pharmaceuticals, and agrochemicals.
- Laboratory Research: Analytical reagent and ethylation agent.
- Industrial Processing: Fumigant (controlled use) and solvent for organic reactions.
- Pharmaceutical: Intermediate for antibiotics, antihistamines, and other drugs.

### 5. Usage Methods

- Dosage: 20-100% concentration (adjust by application).

- Application: Use in closed systems with explosion-proof equipment; avoid contact with oxidizers/reducers.
- Optimal Conditions: Operate at 0-10°C in well-ventilated areas; strictly avoid ignition sources.

## 6. Packaging & Storage

- Packaging: 1L HDPE bottles, 5L HDPE cans, 20L steel drums (UN-approved).
- Storage: Cool, dark, well-ventilated warehouse ( $\leq 10^{\circ}\text{C}$ ); sealed, away from heat/sparks/oxidizers.
- Shelf Life: 6 months (unopened, specified conditions).
- Transportation: Classified as flammable and toxic hazardous goods; transport per regulations.

## 7. Safety & Protection

- Highly flammable and toxic: No smoking near storage/use areas; prohibit open flames.
- Wear chemical safety goggles, nitrile rubber gloves, and organic vapor respirator (P100).
- Avoid inhalation and skin contact; ensure local exhaust ventilation.

## 8. Quality Assurance

- Manufactured under ISO 9001 quality management system.
- Each batch comes with a COA for compliance verification.
- Provide technical support for synthesis optimization and safety operation.