

## Technical Data Sheet (TDS)

### 1. Product Overview

- Product Name: Methyl Ethyl Ketone (MEK)
- English Name: Methyl Ethyl Ketone; 2-Butanone
- CAS Number: 78-93-3
- Formula:  $C_4H_8O$
- Molecular Weight: 72.11 g/mol
- Product Characteristics: Colorless clear liquid with a sharp, sweet odor. High-purity ketone solvent with excellent solubility for organic compounds. Chemically stable under normal conditions, highly flammable, and low toxicity.

### 2. Technical Specifications

Item	Specification
Appearance	Colorless clear liquid
Purity (GC)	$\geq 99.5\%$
Water Content	$\leq 0.05\%$
Density (20°C)	0.804-0.806 g/cm <sup>3</sup>
Boiling Range	79.5-81.5°C
Flash Point (Closed Cup)	-6°C
Viscosity (20°C)	0.45 mPa s
Non-Volatile Residue	$\leq 0.005\%$
Heavy Metals (Pb)	$\leq 0.5$ ppm
Heavy Metals (As)	$\leq 0.1$ ppm
Acidity (as CH <sub>3</sub> COOH)	$\leq 0.001\%$

### 3. Product Advantages

1. High Purity: Low impurity content ensures consistent performance in coatings and synthesis.
2. Excellent Solvency: Dissolves resins, oils, and polymers, ideal for industrial formulations.
3. Balanced Volatility: Faster evaporation than acetone, suitable for coatings and adhesives.
4. Chemical Stability: Inert to most common reagents under standard operating conditions.

### 4. Application Fields

- Chemical Synthesis: Precursor for methyl ethyl ketone peroxide, pharmaceuticals, and agrochemicals.
- Industrial Solvent: Coatings, adhesives, inks, and synthetic rubber processing.
- Laboratory Research: Analytical reagent, reaction solvent, and extraction agent.
- Industrial Cleaning: Precision metal parts and electronic component cleaning.

### 5. Usage Methods

- Dosage: Adjust according to application (20-100% concentration; dilute with compatible solvents if needed).

- Application: Use in closed systems for synthesis; mix with other solvents for formulation.
- Optimal Conditions: Operate at 15-30°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, anti-static clothing, and organic vapor respirator.
- Avoid inhalation and skin contact; 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.