

Technical Data Sheet (TDS)

1. Product Overview

- Product Name: Chloromethane (Methyl Chloride)
- English Name: Chloromethane; Methyl Chloride
- CAS Number:74-87-3
- Formula:CH₃Cl
- Molecular Weight:50.49 g/mol
- Product Characteristics: Colorless, odorless compressed gas (faint sweet odor at high concentration). Highly reactive alkyl halide with excellent solubility. Extremely flammable, toxic, and slightly soluble in water. Suitable for chemical synthesis, refrigeration, and laboratory research.

2. Technical Specifications

Item	Specification
Physical State	Compressed gas
Purity (GC)	≥ 99.5%
Impurity (Dichloromethane)	≤ 0.3%
Impurity (Methanol)	≤ 0.1%
Water Content	≤ 10 ppm
Oxygen Content	≤ 0.05%
Acidity (as HCl)	≤ 0.001%
Boiling Point (1 atm)	-23.7°C
Melting Point	-97.7°C
Density (Gas, 20°C, 1 atm)	2.07 kg/m ³
Flammability	Extremely flammable
Explosive Limits (v/v)	8.1-17.2%
Flash Point	-46°C

3. Product Advantages

1. High Purity: Low impurity content ensures stable reactivity in synthesis.
2. Strong Alkylating Ability: Ideal for methylation reactions and organic synthesis.
3. Versatile Application: Key intermediate for silicones, pharmaceuticals, and pesticides.
4. Refrigerant Properties: Suitable for low-temperature refrigeration systems.

4. Application Fields

- Chemical Synthesis: Precursor for methylcellulose, silicones, and pharmaceutical intermediates.
- Refrigeration: Refrigerant in low-temperature refrigeration systems.
- Laboratory Research: Analytical reagent and methylation agent.
- Industrial Processing: Fumigant (controlled use) and solvent for extraction.

5. Usage Methods

- Dosage: Adjust according to application (controlled by flow meter for gas supply).

- Application: Use in closed gas systems; ensure leak-proof connections.
- Optimal Conditions: Operate in well-ventilated areas; avoid ignition sources and high pressure.

6. Packaging & Storage

- Packaging: 40L steel cylinders, 100L steel cylinders, bulk gas tanks (UN-approved).
- Storage: Cool, dry, well-ventilated warehouse ($\leq 30^{\circ}\text{C}$); keep cylinders upright, secured, away from heat/sparks/oxidizers.
- Shelf Life: 24 months (unopened, specified conditions).
- Transportation: Classified as flammable and toxic hazardous goods; transport per regulations.

7. Safety & Protection

- Extremely flammable and toxic: No smoking near storage/use areas; prohibit open flames.
- Wear chemical safety goggles, anti-static clothing, and organic vapor respirator (P100).
- Avoid gas leakage; use pressure regulators and safety valves.
- In case of leakage, evacuate area, ventilate, and eliminate ignition sources.

8. Quality Assurance

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