

## Technical Data Sheet (TDS)

### 1. Product Overview

- Product Name: Methylene Chloride (Dichloromethane)
- English Name: Methylene Chloride; Dichloromethane
- CAS Number: 75-09-2
- Formula: CH<sub>2</sub>Cl<sub>2</sub>
- Molecular Weight: 84.93 g/mol
- Product Characteristics: Colorless clear liquid with a mild chloroform-like odor. High-purity halogenated hydrocarbon solvent with excellent solubility for organic and inorganic compounds. Chemically stable under normal conditions, low flammability, and moderately toxic.

### 2. Technical Specifications

| Item                                 | Specification                                |
|--------------------------------------|--|
| Appearance                           | Colorless clear liquid                       |
| Purity (GC)                          | ≥ 99.5%                                      |
| Water Content                        | ≤ 0.05%                                      |
| Density (20°C)                       | 1.324-1.328 g/cm <sup>3</sup>                |
| Boiling Range                        | 39.0-41.0°C                                  |
| Flash Point (Closed Cup)             | None (Non-flammable under normal conditions) |
| Viscosity (20°C)                     | 0.44 mPa·s                                   |
| Non-Volatile Residue                 | ≤ 0.005%                                     |
| Heavy Metals (Pb)                    | ≤ 0.5 ppm                                    |
| Heavy Metals (As)                    | ≤ 0.1 ppm                                    |
| Total Chloride (as Cl <sup>-</sup> ) | ≤ 10 ppm                                     |

### 3. Product Advantages

1. High Purity: Low impurity content ensures consistent performance in precision processes.
2. Superior Solvency: Dissolves resins, oils, waxes, and polymers, ideal for extraction and cleaning.
3. Low Flammability: Safer than aliphatic/aromatic solvents for high-risk environments.
4. Controlled Volatility: Fast evaporation rate for efficient manufacturing and coating applications.

### 4. Application Fields

- Chemical Synthesis: Intermediate for pharmaceuticals, agrochemicals, and organic compounds.
- Industrial Solvent: Coatings, adhesives, inks, paint strippers, and plastic processing.
- Laboratory Research: Analytical reagent, extraction solvent, and reaction medium.
- Industrial Cleaning: Precision metal parts, electronic components, and optical equipment cleaning.

### 5. Usage Methods

- Dosage: Adjust according to application (30-100% concentration; dilute with compatible solvents if needed).
- Application: Use in closed systems for synthesis; employ immersion or spray for cleaning (ensure ventilation).

- Optimal Conditions: Operate at 15-25°C in well-ventilated areas; avoid high temperatures (> 60°C).

### 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 ≤ 30°C). Keep sealed, away from heat, oxidizing agents, and strong bases.
- Shelf Life: 12 months (unopened, under specified storage conditions).
- Transportation: Classified as toxic and hazardous goods; transport per relevant regulations.

### 7. Safety & Protection

- Moderately toxic: Avoid inhalation, skin contact, or ingestion; ensure local exhaust ventilation.
- Wear full PPE: Chemical safety goggles, nitrile rubber gloves, protective clothing, and organic vapor respirator.
- Do not mix with strong bases or oxidizers; avoid high temperatures to prevent decomposition.
- 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.