

Technical Data Sheet (TDS)

1. Product Overview

- Product Name: n-Butanol (1-Butanol)
- English Name: n-Butanol; 1-Butanol
- CAS Number: 71-36-3
- Formula: C₄H₉ OH
- Molecular Weight: 74.12 g/mol
- Product Characteristics: Colorless clear liquid with a characteristic alcoholic odor. High-purity aliphatic alcohol solvent with moderate solubility for polar and non-polar compounds. Chemically stable under normal conditions, flammable, and moderately toxic.

2. Technical Specifications

| Item | Specification |
|-----------------------------------|-------------------------------|
| Appearance | Colorless clear liquid |
| Purity (GC) | ≥ 99.5% |
| Water Content | ≤ 0.2% |
| Density (20°C) | 0.809-0.811 g/cm ³ |
| Boiling Range | 117.0-118.5°C |
| Flash Point (Closed Cup) | 35°C |
| Viscosity (20°C) | 2.95 mPa s |
| Non-Volatile Residue | ≤ 0.005% |
| Heavy Metals (Pb) | ≤ 0.5 ppm |
| Heavy Metals (As) | ≤ 0.1 ppm |
| Acidity (as CH ₃ COOH) | ≤ 0.001% |

3. Product Advantages

1. High Purity: Low impurity content ensures stable performance in chemical synthesis and formulation.
2. Moderate Solvency: Balanced solubility for organic compounds, suitable for coatings and adhesives.
3. Low Volatility: Long-lasting effect in formulations, reducing reapplication frequency.
4. Chemical Stability: Inert to most common reagents under standard operating conditions.

4. Application Fields

- Chemical Synthesis: Precursor for butyl acetate, butyl acrylate, and pharmaceutical intermediates.
- Industrial Solvent: Coatings, adhesives, inks, and plasticizers.
- Laboratory Research: Analytical reagent, reaction solvent, and extraction agent.
- Industrial Processing: Plastic and rubber processing, textile dyeing auxiliary.

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; 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

- Flammable and moderately toxic: No smoking near storage/use areas; prohibit open flames.
- Wear appropriate PPE: Chemical safety goggles, nitrile rubber gloves, and protective clothing.
- 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.