

Technical Data Sheet (TDS)

1. Product Overview

- Product Name: Sodium Hydroxide
- English Name: Sodium Hydroxide
- CAS Number: 1310-73-2
- Formula: NaOH
- Molecular Weight: 40.00 g/mol
- Product Characteristics: High-purity white flake/granular solid, highly corrosive, soluble in water with strong exothermic reaction. Strong alkaline properties, excellent saponification and neutralization capabilities.

2. Technical Specifications

Item	Specification
Appearance	White flake/granular solid
Purity (NaOH)	≥ 98.0%
Sodium Carbonate (Na ₂ CO ₃)	≤ 1.0%
Sodium Chloride (NaCl)	≤ 0.05%
Iron (Fe)	≤ 0.001%
Heavy Metals (Pb)	≤ 0.0005%
Moisture Content	≤ 1.5%
Insoluble Matter in Water	≤ 0.01%
Solubility (20°C)	≥ 100 g/100 mL
Alkalinity (as NaOH)	≥ 98.0%

3. Product Advantages

- High purity and strong alkaline activity for efficient performance.
- Fast dissolution rate (note exothermic reaction).
- Versatile application in multiple industries.
- Cost-effective and reliable quality.
- Food-grade option available (meets FDA standards).

4. Application Fields

- Chemical Industry: Synthesis of detergents, dyes, pharmaceuticals, and other chemicals.
- Pulp & Paper: Pulp cooking and bleaching.
- Textile Industry: Fabric mercerization and dyeing.
- Water Treatment: pH adjustment, heavy metal removal, and wastewater neutralization.
- Soap & Detergent: Saponification of fats and oils to produce soap.
- Food Industry: pH adjustment, food processing aids (food grade).
- Other: Aluminum etching, battery production, metal cleaning.

5. Usage Methods



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- Chemical Synthesis: Use in specified molar ratios, add slowly to reaction system (cool if necessary).
- Water Treatment: Dilute to 5-10% solution, add 10-50 ppm to wastewater.
- Soap Making: Mix 1:3 (NaOH:fat) ratio, heat and stir until saponification completes.
- Optimal Conditions: Use at 15-30°C; avoid contact with acids and metals.
- Note: Always add NaOH to water (not vice versa) to prevent splashing.

6. Packaging & Storage

- Packaging Specifications: 25 kg/bag (plastic-lined kraft bag), 50 kg/drum (HDPE), 1000 kg/IBC tote (corrosion-resistant).
- Storage Conditions: Store in cool, dry, well-ventilated warehouse. Use corrosion-resistant containers. Keep away from acids, metals, and oxidizing agents. Temperature $\leq 30^{\circ}\text{C}$.
- Shelf Life: 24 months (unopened).
- Transportation: Handle as UN1823, use corrosion-resistant vehicles. Avoid collision and moisture.

7. Safety & Protection

- Wear full chemical protective suit, nitrile gloves, chemical splash goggles, and face shield during handling.
- Operate in well-ventilated area with emergency eyewash and shower.
- Avoid contact with skin, eyes, and respiratory tract. In case of contact, follow first aid measures immediately.
- Do not mix with acids, metals, or organic materials.

8. Quality Assurance

- Manufactured under ISO 9001 quality management system.
- Food-grade products meet FDA and national food safety standards.
- Each batch accompanied by COA.