

Technical Data Sheet (TDS)

1. Product Overview

- Product Name: Sodium Hydride
- English Name: Sodium Hydride
- CAS Number: 7646-69-7
- Formula: NaH (dispersed in mineral oil)
- Molecular Weight: 24.00 g/mol (NaH)
- Product Characteristics: Gray powder dispersed in mineral oil, strong reducing agent. Reacts violently with water to release hydrogen gas. Chemically reactive, stable under inert gas and dry conditions.

2. Technical Specifications

Item	Specification
Appearance	White to gray powder (mineral oil dispersed)
Purity (NaH)	≥ 60.0%
Mineral Oil Content	38.0-42.0%
Moisture Content	≤ 0.5%
Heavy Metals (Pb)	≤ 0.001%
Iron (Fe)	≤ 0.01%
Insoluble Matter in Mineral Oil	≤ 0.1%
Stability	Stable under inert gas (N ₂ /Ar) and dry conditions

3. Product Advantages

- High reactivity as a strong reducing agent for organic synthesis.
- Mineral oil dispersion reduces fire and moisture sensitivity.
- Consistent purity ensures reliable reaction performance.

4. Application Fields

- Organic Synthesis: Reduction reactions (carbonyl, ester, nitro groups), condensation reactions, deprotonation reactions.
- Chemical Industry: Production of pharmaceuticals, agrochemicals, specialty chemicals.
- Hydrogen Generation: Reaction with water (controlled) to produce hydrogen.
- Metal Surface Treatment: Reduction of metal oxides.

5. Usage Methods

- Organic Synthesis: Use 1.1-1.5 equivalents relative to substrate. Add slowly to dry solvent (THF, ether) under inert gas.
- Hydrogen Generation: Mix with controlled amounts of water (avoid excess) in sealed reactors.
- Optimal Conditions: Use at 0-30°C under inert gas; avoid moisture and air contact.

6. Packaging & Storage

- Packaging Specifications: 100 g/bottle, 500 g/bottle, 1 kg/bottle (sealed under inert gas).



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- Storage Conditions: Store in cool, dry, well-ventilated warehouse. Keep sealed under inert gas. Temperature $\leq 25^{\circ}\text{C}$. Avoid moisture, heat, and oxidizing agents.
- Shelf Life: 12 months (unopened, under specified storage conditions).
- Transportation: Handle as UN1427. Transport in moisture-proof, inert gas-sealed containers. Avoid collision and moisture.

7. Safety & Protection

- Handle only under inert gas (nitrogen/argon) in moisture-free environment.
- Wear full chemical protective suit, nitrile gloves, chemical splash goggles, face shield, and respiratory protection.
- Avoid contact with water, air, acids, alcohols. In case of contact, follow first aid measures immediately.
- Firefighting: Use dry sand, dry powder, or CO_2 ; do not use water.

8. Quality Assurance

- Manufactured under ISO 9001 quality management system.
- Each batch accompanied by COA.
- Provide technical support for safe handling and application.



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