纳维盈医化科技
NEWAY SINOPHC TECH

NEWAY SINOPHC TECH. LIMITED

ADD:RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE.
Email:marketing01@newayphc.com；Phone:+86-021-50350029 https://www.newayphc.com

Technical Data Sheet (TDS)

1. Product Overview

- Product Name: Phosphine
- English Name: Phosphine
- CAS Number: 7803-51-2
- Formula: PH_3
- Molecular Weight: 34.00 g/mol
- Product Characteristics: High-purity colorless gas with a garlic-like odor. Extremely flammable and highly toxic. Slightly soluble in water, used primarily as a fumigant and chemical intermediate.

2. Technical Specifications

Item	Specification
Appearance	Colorless gas
Odor	Garlic-like
Purity (PH_3)	≥ 99.0%
Impurity (Nitrogen)	≤ 0.5%
Impurity (Oxygen)	≤ 0.3%
Moisture Content	≤ 50 ppm
Ammonia (NH_3)	≤ 0.1%
Boiling Point	-87.7℃
Melting Point	-133.8℃
Density (25℃)	1.18 g/L (air = 1)
Flammability	Extremely flammable (explosion limits: 1.8-98% v/v)

3. Product Advantages

- High purity ensures effective fumigation and synthesis performance.
- Strong fumigant activity against pests in grain storage.
- Versatile application in semiconductor and chemical industries.

4. Application Fields

- Fumigation: Grain storage, tobacco, and agricultural products (controls insects, rodents).
- Chemical Synthesis: Production of phosphorus-containing compounds, pharmaceuticals, and pesticides.
- Semiconductors: Dopant source for semiconductor materials, epitaxial growth.
- Laboratory: Analytical reagent for chemical tests and research.

5. Usage Methods

- Fumigation: Inject 0.5-2 ppm into sealed storage facilities, maintain for 24-48 hours. Ventilate thoroughly before entry.
- Chemical Synthesis: Use in closed reaction systems with precise flow control (0.1-1 L/min).
- Semiconductor Dopant: Deposit via chemical vapor deposition (CVD) at high temperature.

- Optimal Conditions: Use at 0-25℃; avoid contact with oxidizing agents and open flames.
- Note: Strictly follow safety protocols; use only with trained personnel and proper equipment.

6. Packaging & Storage

- Packaging Specifications: High-pressure steel cylinders (5 L, 10 L, 40 L) with pressure regulators and leak-proof valves.
- Storage Conditions: Store in cool, dry, well-ventilated, explosion-proof warehouse. Keep cylinders upright and secured. Temperature ≤ 30℃. Keep away from heat, sparks, open flames, and oxidizing agents.
- Shelf Life: 12 months (cylinder, proper storage).
- Transportation: Handle as UN2199. Transport in approved cylinder trucks. Avoid collision, sunlight, and high temperature.

7. Safety & Protection

- Use only in well-ventilated, explosion-proof areas with gas detection systems and emergency shutdown devices.
- Wear self-contained breathing apparatus (SCBA), chemical-resistant suit, and nitrile gloves at all times.
- Strictly prohibit smoking, open flames, and sparks in the vicinity.
- In case of leakage, evacuate immediately, ventilate the area, and contact emergency services.

8. Quality Assurance

- Manufactured under ISO 9001 quality management system and GB/T 3864 (hazardous gas safety standard).
- Each cylinder is tested for pressure, leakage, and purity before delivery.
- Each batch accompanied by COA.
- Provide technical support for safe handling and application.

纳维盈医化科技
NEWAY SINOPHC TECH