

Safety Data Sheet (SDS)

Revision: Sep. 14, 2026

SECTION 1: Identification

Item	Information
Product name	Niobium Pentoxide Powder
Chemical formula	Nb_2O_5
CAS No.	1313-96-8
EC No.	215-213-6
Recommended use	Laboratory, research, ceramic, optical and materials-processing applications
Supplier	MetalsTek Engineering, 32 N Gould St., Sheridan, WY 82801, USA
Contact	sales@metalstek.com +1 (786) 825 8645

SECTION 2: Hazards Identification

Not classified as hazardous under OSHA HCS / GHS for the substance as supplied. Avoid generating or inhaling fine dust.

GHS Element	Information
Classification	Not classified as hazardous based on available information for the substance as supplied.
Signal word	None
Pictograms	None required
Hazard statements	None required by classification
Other hazards	Fine airborne dust may cause mechanical irritation to eyes and respiratory tract. Avoid dust accumulation and inhalation.

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SECTION 3: Composition / Information on Ingredients

Substance	CAS No.	Concentration
Niobium Pentoxide	1313-96-8	≥99.9%

SECTION 4: First-Aid Measures

Exposure route	First aid
Inhalation	Move person to fresh air. Seek medical attention if symptoms persist.
Skin contact	Wash with soap and water. Remove contaminated clothing.
Eye contact	Rinse cautiously with clean water for several minutes. Remove contact lenses if easy to do. Obtain medical attention if irritation persists.
Ingestion	Rinse mouth. Do not induce vomiting. Seek medical advice if unwell.

SECTION 5: Fire-Fighting Measures

Material is not expected to be combustible. Use extinguishing media appropriate for the surrounding fire. Firefighters should use standard protective equipment and self-contained breathing apparatus where necessary.

SECTION 6: Accidental Release Measures

Avoid creating airborne dust. Wear suitable respiratory, eye and skin protection. Collect mechanically or with a HEPA-filtered vacuum and place in a suitable closed container. Do not wash large quantities into drains.

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SECTION 7: Handling and Storage

Handle in a well-ventilated area and minimize dust generation. Keep container tightly closed. Store in a cool, dry place away from incompatible materials and moisture.

SECTION 8: Exposure Controls / Personal Protection

Control	Recommendation
Engineering controls	Local exhaust ventilation where dust may be generated.
Respiratory protection	Use a NIOSH-approved particulate respirator when engineering controls are insufficient or dust is generated.
Eye protection	Safety glasses or goggles.
Hand protection	Protective gloves appropriate to the work.
Hygiene	Wash hands after handling; do not eat, drink or smoke in work areas.

SECTION 9: Physical and Chemical Properties

Property	Value
Appearance	White to off-white powder
Odor	Odorless
Molecular weight	265.81 g/mol
Density	~4.47 g/cm ³
Melting point	~1512 °C
Solubility in water	Insoluble / practically insoluble
Flammability	Not expected to be flammable

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SECTION 10: Stability and Reactivity

Stable under recommended storage conditions. Avoid excessive dust generation and contact with incompatible strong acids or reactive chemicals. Hazardous polymerization is not expected.

SECTION 11: Toxicological Information

No specific acute toxicity classification is assigned based on available information. Dust may cause temporary mechanical irritation of the eyes, skin, or respiratory tract. Toxicological properties of fine powders have not been fully investigated; use prudent laboratory controls.

SECTION 12: Ecological Information

No comprehensive ecological data are available for this product. Avoid uncontrolled release to the environment. The inorganic oxide is not expected to biodegrade.

SECTION 13: Disposal Considerations

Dispose of material and contaminated packaging in accordance with applicable federal, state, local, and institutional regulations. Do not dispose of large quantities to drains.

SECTION 14: Transport Information

Mode	Status
DOT (US)	Not regulated as dangerous goods based on available information.
IMDG	Not regulated as dangerous goods based on available information.
IATA	Not regulated as dangerous goods based on available information.



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SECTION 15: Regulatory Information

This document follows the 16-section SDS format. Regulatory status and reporting requirements may vary by jurisdiction and use. The user is responsible for determining applicability of local regulations.

SECTION 16: Other Information

Revision date: Sep. 14, 2026. Prepared for the product specification shown above. The information is provided in good faith for safe handling and should be used together with the user's own risk assessment and applicable regulations.