



LTS Research Laboratories, Inc.
Safety Data Sheet
Niobium Dioxide

1. Product and Company Identification

Trade Name: Niobium Dioxide
Chemical Formula: NbO₂
Recommended Use: Scientific research and development

Manufacturer/Supplier: LTS Research Laboratories, Inc.
Street: 2001 Oaks Pkwy
City: Belmont
State: North Carolina
Zip Code: 28012
Country: USA
Tel #: +1 (704) 899 2840

24-Hour Emergency Contact: 800-424-9300 (US & Canada)
+1-703-527-3887 (International)


2. Hazards Identification

Signal Word: None

Hazard Statements: None

Precautionary Statements: None

HMIS Health Ratings (0-4):
Health: 0
Flammability: 0
Physical: 0



3. Composition

Chemical Family: Metal Oxide
Additional Names: Niobium (IV) Oxide

Niobium Dioxide (NbO₂):
Percentage: 100 wt%
CAS #: 12034-59-2
EC #: 234-809-7

4. First Aid Procedures

General Treatment: Seek medical attention if symptoms persist.
Special Treatment: None
Important Symptoms: None

Inhalation: Remove victim to fresh air. Supply oxygen if breathing is difficult. Seek medical attention.

Ingestion: Clean mouth with water and drink afterwards plenty of water. Seek medical attention.

Skin: Wash affected area with mild soap and water. Remove any contaminated clothing. Seek medical attention.

Eyes: Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention.

5. Firefighting Measures

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| Flammability: | Non-flammable, except as powder |
| Extinguishing Media: | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
| Spec. Fire Fighting Procedure: | Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products. |

6. Accidental Release Measures

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| If Material Is Released/Spilled: | Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust. |
| Environmental Precautions: | Isolate runoff to prevent environmental pollution. |

7. Handling and Storage

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|----------------------------|---|
| Handling Conditions: | Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation. Avoid dust formation. Wash thoroughly after handling. |
| Storage Conditions: | Store in a cool, dry and well-ventilated place in a tightly sealed container. Store apart from materials and conditions listed in section 10. |
| Work/Hygienic Maintenance: | Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air. |
| Ventilation: | Provide sufficient ventilation to maintain concentration at or below threshold limit. |

8. Exposure Controls and Personal Protection

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|------------------------------|---|
| Permissible Exposure Limits: | N/A |
| Threshold Limit Value: | N/A |
| Special Equipment: | None |
| Respiratory Protection: | Dust Respirator, type N95 |
| Protective Gloves: | Rubber gloves |
| Eye Protection: | Safety glasses or goggles |
| Body Protection: | Protective work clothing. Wear close-toed shoes and long sleeves/pants. |

9. Physical and Chemical Characteristics

| | |
|---------------------------|--|
| Color | Black |
| Form: | Powder, Granules, Pellets, Sputtering target, Custom parts |
| Odor: | N/A |
| Water Solubility: | N/A |
| Boiling Point: | N/A |
| Melting Point: | N/A |
| Flash Point: | N/A |
| Autoignition Temperature: | N/A |
| Density: | 5.9 g/cc |
| Molecular weight: | 124.91 g/mol |

10. Reactivity

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| Stability: | Stable under recommended storage conditions |
| Reacts With: | Strong oxidizing agents |
| Incompatible Conditions: | Incompatible products |
| Hazardous Decomposition Products: | Niobium oxides |

11. Toxicological Information

| | |
|--------------------------------|-----|
| Potential Health Effects: | |
| Eyes: | N/A |
| Skin: | N/A |
| Ingestion: | N/A |
| Inhalation: | N/A |
| Chronic: | N/A |
| Signs & Symptoms: | N/A |
| Aggravated Medical Conditions: | N/A |
| Median Lethal Dose: | N/A |
| Carcinogen: | N/A |

12. Ecological Information

| | |
|--|---------------------------|
| Aquatic Toxicity: | N/A |
| Persistent Bioaccumulation Toxicity: | N/A |
| Very Persistent, Very Bioaccumulative: | N/A |
| Notes: | Do not empty into drains. |

13. Disposal Considerations

Dispose of in accordance with local, state, national, and international regulations.

14. Transportation Data

| | |
|-----------------------|----------------------------------|
| Hazardous: | Not hazardous for transportation |
| Hazard Class: | N/A |
| Packing Group: | N/A |
| UN Number: | N/A |
| Proper Shipping Name: | N/A |

15. Regulatory Information

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|--------------------------------|-----|
| Sec 302 Extremely Hazardous: | No |
| Sec 304 Reportable Quantities: | N/A |
| Sec 313 Toxic Chemicals: | No |

16. Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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