

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND CONTACT INFORMATION

Product Name: Titanium Standards (Nitrogen, Hydrogen, Oxygen Calibration Standards)

AR 637, AR 642, AR 648, AR 649, AR 650, AR 651, AR647, AR588, AR589

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2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS NO.	%W	CHEMICAL NAMES	OSHA PEL (mg/m3)	ACGIH TLV (mg/m3)
7440-32-6	100	Titanium	15	10

3. HAZARD IDENTIFICATION

POTENTIAL HEALTH EFFECTS

EYES: May cause eye irritation.

SKIN: May cause skin irritation.

INHALATION: Short-term overexposure may result in discomfort such as dizziness, nausea or dryness/irritation of nose and throat.

INGESTION: Not available.

CHRONIC OVEREXPOSURE: May result in neurological damage, lung fibrosis, pneumoconiosis, and other lung diseases.

ACUTE OVEREXPOSURE: Can result in the same symptoms as short-term overexposure except to a great degree as well as watery eyes, headache, breathing difficulty, frequent coughing and/or chest pains. Some toxic gases may cause pulmonary edema, asphyxiation and excessive exposure can be fatal.

MEDICAL CONDITIONS AGGRAVATED: Persons with impaired pulmonary function, airway diseases and conditions such as asthma, emphysema, chronic bronchitis, etc.

CARCINOGENICITY: None.

4. FIRST AID MEASURES

EYES: Flush with large amounts of water, lifting the lower and upper lids. Get medical attention if irritation persists.

INHALATION: Removed from exposure to fresh air immediately. Get medical attention if breathing has stopped.

SKIN: Remove clothing immediately and wash area of skin with soap or mild detergent for 5 minutes. Get medical attention if irritation persists.

INGESTION: If significant amounts of metal are ingested, consult physician.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

Non-flammable

Flash Point: Not available

Flammable Limits: (% by Volume in Air): Lower: None Upper: None

AUTO-IGNITION TEMPERATURE: N/A

HAZARDOUS COMBUSTION PRODUCTS: N/A.

EXTINGUISHING MEDIA: Dry chemical.

FIREFIGHTING INSTRUCTIONS: Solid form is not combustible under normal conditions, use fire fighting methods that are appropriate for the surrounding fire. Molten metal alloys may explode on contact with water, they may also react violently with water, rust and certain metal oxides (i.e. Oxides of copper, iron and lead).

6. ACCIDENTAL RELEASE MEASURES

SMALL/LARGE SPILL: In solid form, this material poses no special clean-up problems.

7. HANDLING AND STORAGE

HANDLING: No special precautions.

STORAGE: Keep container closed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: local ventilation is recommended to control exposure of airborne fumes whenever possible.

RESPIRATORY PROTECTION: NIOSH/MSHA respirator if exposure above the PEL limit.

SKIN AND HAND PROTECTION: Protective gloves should be worn as required for welding, burning or handling operations.

EYE AND FACE PROTECTION: Safety glasses with side shields should be worn when grinding or cutting. Face shields should be worn when welding or cutting.

OTHER PROTECTIVE EQUIPMENT: As required depending of operations.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Silver grey metal

BOILING POINT: 5900° F (3260° C)

FREEZE-MELT POINT: 3034° F (1668° C)

VAPOR PRESSURE: N/A

VAPOR DENSITY: N/A

SOLUBILITY IN WATER: Insoluble.

SPECIFIC GRAVITY: 7.3

pH: N/A

ODOR: None

PERCENT VOLATILES: N/A

EVAPORATION RATE: N/A

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable.

INCOMPATIBILITY: None.

HAZARDOUS DECOMPOSITION PRODUCTS: Metal fumes.

HAZARDOUS POLYMERIZATION: None.

11. TOXICOLOGICAL INFORMATION

None reported.

12. ECOLOGICAL INFORMATION

None available.

13. DISPOSAL CONSIDERATION

Dispose of in accordance with federal, state and local regulations and laws.

14. TRANSPORTATION INFORMATION

USA DOT: Not regulated

15. REGULATORY INFORMATION

US FEDERAL REGULATIONS

TSCA STATUS: On toxic Substance Control Inventory

CERCLA Reportable Quantity: None

RCRA Status: Not regulated

SARA TITLE III:

Section 302 Extremely Hazardous Substances: None

Section 311/312 Hazardous Categories: Acute, Chronic

Section 313 Toxic Chemicals: None

CANADAIN REGULATIONS

WHMIS: D2B

16. OTHER INFORMATION

SUPPLEMENTAL INFORMATION

The data and information as stated was furnished by the manufacturer/vendor &/or supplier of this product. Alpha Resources, Inc. cannot warrant the accuracy of this information and shall not be responsible or liable for any damage that may result, should any of the information be erroneous.

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