# MATERIAL SAFETY DATA SHEET
OSHA HAZARD COMMUNICATION RULE

## 1. CHEMICAL IDENTITY

<table>
<thead>
<tr>
<th>LABEL IDENTITY</th>
<th>Terbium Metal</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEMICAL NAME/SYNONYMS</td>
<td>Terbium Metal</td>
</tr>
<tr>
<td>FORMULA</td>
<td>Tb</td>
</tr>
<tr>
<td>CHEMICAL FAMILY</td>
<td>Metal</td>
</tr>
<tr>
<td>CALCULATED MOLECULAR WEIGHT</td>
<td>158.9254</td>
</tr>
<tr>
<td>CAS REGISTRY NUMBER</td>
<td>7440-27-9</td>
</tr>
</tbody>
</table>

## 2. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>COLOR, FORM AND ODOR</th>
<th>Silver gray metallic solid, odorless</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOILING POINT</td>
<td>3123</td>
</tr>
<tr>
<td>DENSITY (gm/cc)</td>
<td>8.2294</td>
</tr>
<tr>
<td>VAPOR PRESSURE @ 20°</td>
<td>ND</td>
</tr>
<tr>
<td>% VOLATILE BY VOLUME (%)</td>
<td>ND</td>
</tr>
<tr>
<td>REACTION WITH WATER</td>
<td>Reacts slowly with water to liberate H2</td>
</tr>
<tr>
<td>EVAPORATION RATE (H2O=1)</td>
<td>ND</td>
</tr>
<tr>
<td>SOLUBILITY IN WATER</td>
<td>ND</td>
</tr>
<tr>
<td>MELTING POINT</td>
<td>1360 ±4</td>
</tr>
<tr>
<td>OTHER</td>
<td>Tarnishes in moist air</td>
</tr>
</tbody>
</table>

## 3. FIRE AND EXPLOSION HAZARD DATA

<table>
<thead>
<tr>
<th>FLASH POINT</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTOIGNITION TEMPERATURE (°C)</td>
<td>Unknown</td>
</tr>
<tr>
<td>EXTINGUISHING MEDIA</td>
<td>Agent for metal fires (like G-1 powder, MET-L-X, or TEC)</td>
</tr>
<tr>
<td>SPECIAL FIRE FIGHTING PROCEDURES</td>
<td>Do not use water!</td>
</tr>
<tr>
<td>UNUSUAL FIRE &amp; EXPLOSION HAZARDS</td>
<td>Flammable in form of fine powder or dust</td>
</tr>
</tbody>
</table>
4. HEALTH HAZARD INFORMATION

POSSIBLE EXPOSURE LIMITS: Not Set

EFFECTS OF OVEREXPOSURE:
IRRITATION: Skin, Eye; mild transient
CORROSIVITY: None
SENSITIZATION: None
LUNG EFFECTS: May cause mild irritation. Extreme overexposure may cause pulmonary edema. As a lanthanide, terbium may act as a blood anticoagulant. No specific data is available for terbium. Handle with care.

EMERGENCY FIRST AID:
INGESTION: Induce vomiting, seek medical attention.
DERMAL: Flush with soap and water
EYES: Flush with plenty of water for at least 15 minutes INHALATION: Remove to fresh air (problem for dust only)

5. REACTIVITY DATA

STABILITY
CONDITIONS CONTRIBUTING TO UNSTABILITY ND
INCOMPATIBILITY (MATERIALS TO AVOID) Strong oxidizers, halogens
HAZARDOUS DECOMPOSITION PRODUCTS None
HAZARDOUS POLYMERIZATION ND
CONDITIONS TO AVOID ND

6. SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Sweep or scoop up and remove.

WASTE DISPOSAL METHOD:
Not a hazardous waste. Ignite small quantities in well-vented hood to form oxide. Dispose of oxide with normal refuse.
TERBIUM
MATERIAL SAFETY DATA SHEET

7. SPECIAL PROTECTIVE INFORMATION

VENTILATION REQUIREMENTS
Local exhaust

OTHER
Handle in dry box to prevent contact with air or moisture.

PROTECTIVE GLOVES
Neoprene

EYE PROTECTION
Safety glasses

RESPIRATOR
If dust is being generated a half-mask air purifying respirator should be worn.

OTHER PROTECTIVE EQUIPMENT
Normal laboratory wear.

8. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING/STORAGE:
Wash thoroughly after handling. Do not breathe dust, vapor, mist, gas. Keep container closed. Keep away from heat, sparks, and open flames. Store in tightly closed containers.

TRANSPORTATION REQUIREMENTS
DOT CLASS: Flammable solid
UN NUMBER: 1325
IMCO CLASS: 4.3

OTHER:

PRECAUTIONARY LABELING
NONE

A note concerning handling precautions of some chemicals:
Some of the chemicals listed herein are research or experimental substances which may be toxic, as defined by various governmental regulations. In accordance with Environmental Protection Agency regulations, these materials should only be handled by, or under the direct supervision of, a “technically qualified individual”, as defined in 40 CFR, par 710.0(na). THE ABOVE INFORMATION IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. HOWEVER, SINCE DATA, SAFETY STANDARDS AND GOVERNMENT REGULATIONS ARE SUBJECT TO CHANGE THE CONDITIONS OF HANDLING AND USE, OR MISUSE ARE BEYOND OUR CONTROL, ANGSTROM SCIENCES MAKE NO WARRANTY, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR THE RELIANCE THEREON. USER SHOULD SATISFY HIMSELF THAT HE HAS ALL CURRENT DATA RELEVANT TO HIS PARTICULAR USE.  
NA= NOT APPLICABLE  ND= NO DATA FOUND