I  PRODUCT IDENTIFICATION

Trade Name: Tantalum Oxide  Chemical Family: Metal oxide

Formula: Ta₂O₅  CAS #: 1314-61-0

II  HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component</th>
<th>%</th>
<th>OSHA/PEL</th>
<th>ACGIH/TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tantalum Oxide</td>
<td>0-100</td>
<td>5 mg Ta/m³</td>
<td>5 mg Ta/m³</td>
</tr>
</tbody>
</table>

III  PHYSICAL DATA

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Specific Gravity (water = 1)</td>
<td>8.2</td>
</tr>
<tr>
<td>Melting Point</td>
<td>1872 °C</td>
</tr>
<tr>
<td>Appearance and Odor</td>
<td>White powder and pieces, no odor.</td>
</tr>
<tr>
<td>Solubility in H₂O</td>
<td>Insoluble</td>
</tr>
</tbody>
</table>

IV  FIRE AND EXPLOSION HAZARDS DATA

Flash Point (Method used): N/A  Autoignition Temperature: N/A
Flammable Limits: Upper: N/A  Flammability: Non-flammable  Lower: N/A

Extinguishing Media: Use suitable extinguishing media for surrounding materials and type of fire.
Special Fire Fighting Procedures: Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.
Unusual Fire & Explosion Hazard: When heated to decomposition, tantalum oxide may emit toxic fumes.

V HEALTH HAZARD INFORMATION

Effects of Exposure:

To the best of our knowledge the chemical, physical and toxicological properties of tantalum oxide have not been thoroughly investigated and recorded. Some industrial skin injuries from tantalum have been reported. Systemic industrial poisoning however, is apparently unknown. Questionable carcinogen with experimental tumorigenic data.

Acute:

Inhalation: May cause irritation to the nose and throat.
Ingestion: May be toxic by ingestion.
Skin: May cause abrasive irritation.
Eye: May cause abrasive irritation.

Chronic: No chronic health effects recorded.

Target Organs: No target organs affected.
Medical conditions generally aggravated by exposure: Pre-existing respiratory and skin disorders.

Carcinogenicity: NTP? No IARC Monograph? No OSHA Regulated? No

EMERGENCY FIRST AID PROCEDURES:

INHALATION: Remove to fresh air; keep warm and quiet; give oxygen if breathing is difficult and seek medical attention if symptoms persist.
INGESTION: Give 1-2 glasses of milk or water and induce vomiting; seek medical attention. Never give anything by mouth to an unconscious person.
SKIN: Remove contaminated clothing; brush material off skin; wash affected area with mild soap and water; seek medical attention if symptoms persist.
EYES: Immediately flush eyes with lukewarm water, lifting upper and lower eyelids, for at least 15 minutes. Seek medical attention if symptoms persist.

VI REACTIVITY DATA

Stability: Stable.
Conditions to Avoid: None
Incompatibility (Materials to Avoid): Strong oxidizing agents, CIF₃, BrF, lithium and acids.
Hazardous Polymerization: Will not occur
Hazardous Decomposition Products: None

VII SPILL OR LEAK PROCEDURES

http://www.espi-metals.com/msds/s/Tantalum%20Oxide.htm 11/16/05
Steps to Be Taken If Spilled or Released: Wear appropriate respiratory and protective equipment. 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 proper disposal. Take care not to raise dust.

Waste Disposal Method: Dispose of in accordance with local, state and federal regulations.

VIII  SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type): NIOSH - approved dust respirator.
Ventilation: Local: To maintain concentration at or below the PEL, TLV. Mechanical: Recommended

Eye Protection: Safety Glasses.
Other Protective Equipment: Protective gear suitable to prevent contamination.

IX   SPECIAL PRECAUTIONS

Other Handling and Storage Conditions: Store in cool, dry area. Wash thoroughly after handling. Store in tightly sealed container.

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. ESPI shall not be held liable for any damage resulting from handling or from contact with the above product.

Prepared by: S. Dierks
Dated: January 1994