Section I

Kurt J. Lesker Company
1925 Worthington Avenue
Clairton, PA 15025
Ph: 412/387-9200 Fax: 412/233-4275

Emergency Phone Numbers
Chemtrec 800/424-9300
Poison Center 800/562-8236

Chemical Name and Synonyms
Tantalum Pentoxide

Date of Last Revision
1/11/91

Formula
Ta₂O₅

Chemical Family
Metal Oxide

Chemical Abstract No.
1314-61-0

TSCA
Listed

Calc. Molecular Wt.
442

Section II

Hazardous Ingredients

<table>
<thead>
<tr>
<th>Hazardous Ingredients</th>
<th>CAS #</th>
<th>%</th>
<th>TLV</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tantalum Pentoxide</td>
<td>1314-61-0</td>
<td>99+</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Tantalum</td>
<td></td>
<td>5.0</td>
<td>5.0</td>
<td></td>
</tr>
</tbody>
</table>

Section III

Physical Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point (°C)</td>
<td>ND</td>
</tr>
<tr>
<td>Density (gm/cc)</td>
<td>8.2</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>NA</td>
</tr>
<tr>
<td>% Volatile by Volume</td>
<td>None</td>
</tr>
<tr>
<td>Reaction with Water</td>
<td>NA</td>
</tr>
<tr>
<td>Evaporation Rate (H₂O -1)</td>
<td>NA</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Melting Point (°C)</td>
<td>1872 +°C</td>
</tr>
<tr>
<td>Appearance and Odor</td>
<td>Powder white crystalline color - no odor</td>
</tr>
</tbody>
</table>

Section IV

Fire & Explosion Hazard Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point (method)</td>
<td>None</td>
</tr>
<tr>
<td>Autoignition Temp.</td>
<td></td>
</tr>
<tr>
<td>Flammability</td>
<td></td>
</tr>
<tr>
<td>LEI</td>
<td>None</td>
</tr>
<tr>
<td>UEI</td>
<td>None</td>
</tr>
</tbody>
</table>

Extinguishing Media: Material is noncombustible, use extinguishing media appropriate to the surrounding fire.

Special Fire Fighting Procedures: If this material is involved in a fire-fighting task, use a full facepiece, air supplied positive pressure respiratory device.

Unusual Fire and Explosion Hazards: Material could become molten or sufficiently hot to react violently with water during a fire fighting task. The quantity of the material involved and the nature of the fire will require caution if water is used as the extinguishing agent.

Section V

Spill or Leak Process

Steps to be Taken in Case Material is Released or Spilled: Caution should be taken to minimize airborne generation of powder or dust and avoid contamination of air and water. Dry clean up and vacuum system utilizing a
high efficiency particulate air filtration system are recommended. Liquid spills should be contained, absorbed or treated such that proper disposal may be accomplished.

Waste Disposal Method (Consult federal, state or local authorities for proper disposal procedures):

### Section VI  Health Hazard Data

<table>
<thead>
<tr>
<th>Toxicity Data</th>
<th>HMIS Hazard Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>No toxic effects have been reported on this material among occupationally exposed individuals.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Route(s) of Entry</th>
<th>Inhalation: X</th>
<th>Skin: X</th>
<th>Ingestion: X</th>
</tr>
</thead>
</table>

**Effects of Overexposure (acute and chronic)**

- **Inhalation:**
  - Dermal/Eye Contact:
  - **Other (specify):** As a liquid, dust, fume or mist, this material may cause irritation to the skin, eyes or respiratory system dependent upon contact and the extent of exposure although no specific acute health effects have been reported in man. This compound is not reactive with body fluids and no adverse effects have been experienced among exposed workers.

- **Medical Conditions Generally Aggravated by Exposure:** ND

- **Carcinogenicity:** NA
- **NTP:**
- **IARC Monographs:**
- **OSHA Regulations:**

**Emergency and First Aid Procedures**

- **Ingestion:** Swallowing of liquid, dust or powder can be treated by having the affected person swallow large quantities of water and attempt to vomit. Obtain medical assistance at once.
- **Inhalation:** Breathing difficulty from exposure to dust, remove to fresh air. If breathing stops perform artificial respiration and obtain medical assistance at once.
- **Skin Contact:** Standard first aid for cuts and abrasions. Skin contamination, wash with soap and water. If irritation persists, obtain medical assistance. Skin contamination, wash with soap and water. If irritation persists, obtain medical assistance.
- **Eye Contact:** Flush eyes affected by liquid, dust or powder with copious amounts of clean water. If irritation persists, obtain medical assistance.
- **No contact lenses when working with dusts, powders, or liquids.**

### Section VII  Reactivity Data

- **Stable:** X
- **Unstable:**
- **Conditions Contributing to Instability:** NA

- **Incompatibility (materials to avoid):** acids, toxic products

- **Hazardous Decomposition Products - Thermal and Other (list):** Elemental constituents or compounds may be generated as a result of heating them.

- **Hazardous Polymerization**
  - **May Occur:** Will Not Occur: X

### Section VIII  Special Protective Information

- **Respiratory Protection (specify type). Use Only Niosh Approved Equip.**
  - Use NIOSH approved equipment

- **Ventilation (always maintain exposure below permissible limits)**
  - **Local Exhaust:** Used to control dust, mist or fume
  - **Mechanical (general):** Special: Other:

- **Protective Gloves:** With liquids or powders
- **Eye Protection:** Safety Glasses
Other Protective Equipment/Work Practices: Protective clothing such as uniforms, disposable coveralls, safety shoes, may be required during handling operations as appropriate to the circumstances of exposure.

Section IX  Special Precautions

| Precautions to be Taken in Handling and Storing: This material should be handled to avoid employee contact and spill or release potential. Wash hands prior to eating or smoking. Store in clean dry area. Label with proper identification. |
|DOT Class: NA   UN Number: NA   IMCO Class: NA   Other:|

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ND = NO DATA FOUND      NA = NOT APPLICABLE