Thorium dioxide is used as a stabilizer in tungsten electrodes in TIG welding, electron tubes, and aircraft engines. As an alloy, thoriated tungsten metal is not easily deformed because the high-fusion material thoria augments the high-temperature mechanical properties, and thorium helps stimulate the emission of electrons (thermions). It is the most popular oxide additive because of its low cost, but is being phased out in favor of non-radioactive elements such as cerium, lanthanum and zirconium. Thorium dioxide is used as a stabilizer in tungsten electrodes in TIG welding, electron tubes, and aircraft engines. As an alloy, thoriated tungsten metal is not easily deformed because the high-fusion material thoria augments the high-temperature mechanical properties, and thorium helps stimulate the emission of electrons (thermions). It is the most popular oxide additive because of its low cost, but is being phased out in favor of non-radioactive elements such as cerium, lanthanum and zirconium.

Quick Facts

Product : Thorium Oxide Powder
Stock No : NS6130-12-001036
CAS : 1314-20-1
Color : White
Form : Powder
APPLIcATIONS

✓ Nuclear fuels
✓ Alloys
✓ Catalysis
✓ Glass manufacture

Additional Powder Characteristics

<table>
<thead>
<tr>
<th>Stock No.</th>
<th>Purity</th>
<th>APS (μm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NS6130-12-001036</td>
<td>99%</td>
<td>40-60μm</td>
</tr>
</tbody>
</table>

Technical Specification

<table>
<thead>
<tr>
<th>Molecular Formula</th>
<th>Molecular Weight</th>
<th>Density</th>
<th>Melting Point</th>
<th>Boiling Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>ThO2</td>
<td>264.04g/mol</td>
<td>10g/cm³</td>
<td>3390°C</td>
<td>4400°C</td>
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</tbody>
</table>
Chemical Composition

<table>
<thead>
<tr>
<th>Product</th>
<th>Weight Percent (nominal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ThO2</td>
<td></td>
</tr>
<tr>
<td>Other Metal</td>
<td></td>
</tr>
<tr>
<td>Thorium Oxide Powder</td>
<td>99%</td>
</tr>
<tr>
<td></td>
<td>0.1%</td>
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</tbody>
</table>

Properties
✓ Chemical Formula: ThO2
✓ CAS No.: 1314-20-1

Ordering Information and Stock Availability
✓ Product: Thorium Oxide Powder
✓ Stock Availability: Available
✓ Distribution: Global
✓ Packing Sizes: 25Gms, 50Gms, 100Gms, 500Gms & Bulk Orders

Handling Recommendations
✓ Store in the original container in a dry location.
✓ Tumble contents prior to use to prevent segregation.
✓ Open containers should be stored in a drying oven to prevent moisture pickup.

Safety Recommendations
Download MSDS/SDS NS6130-12-001036 are available from the Nanoshel Website at https://www.nanoshel.com/product/thorium-oxide-powder