LANTHANUM OXIDE NANOPOWDER

$\text{La}_2\text{O}_3$

Purity 99.9%

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Lanthanum oxide (La$_2$O$_3$) powders have a lot of attractive properties for industrial and technological applications such as: Nanometer lanthanum oxide can be used in piezoelectric materials to increase product piezoelectric coefficients and improve product energy conversion efficiency; Nano-lanthanum oxide can be used for the manufacture of precision optical glass, high-refraction optical fiber, all kinds of alloy materials; Nano-lanthanum oxide can be used for the preparation of organic chemical products catalysts, and in automobile exhaust catalyst; Nanometer Lanthanum oxide can improve the burning rate of propellant, is a promising catalyst; As regards the photoelectric conversion efficiency of nano-lanthanum oxide is high, it can be used in light-converting agricultural film; Also, nano-lanthanum oxide can be used in electrode materials and in light-emitting material (blue powder), hydrogen storage materials, laser materials etc.

**Quick Facts**

- **Product**: Lanthanum Oxide Nanopowder
- **Stock No**: NS6130-03-326
- **CAS**: 1312-81-8
- **Color**: White
- **Form**: Powder
- **Symbol**: La$_2$O$_3$
- **Group**: Lanthanum 3/Oxygen 16

**Electronic Configuration:**
Lanthanum [Xe] 5d$^1$ 6s$^2$/Oxygen [He] 2s$^2$ 2p$^4$

**Additional Powder Characteristics**

<table>
<thead>
<tr>
<th>Stock No.</th>
<th>Purity</th>
<th>APS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NS6130-03-326</td>
<td>99.9%</td>
<td>&lt;100nm</td>
</tr>
</tbody>
</table>

**Technical Specification**

<table>
<thead>
<tr>
<th>Molecular Formula</th>
<th>Molecular Weight</th>
<th>Density</th>
<th>Melting Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>La$_2$O$_3$</td>
<td>325.809g/mol</td>
<td>6.51g/cm$^3$</td>
<td>2315°C</td>
</tr>
</tbody>
</table>

**Chemical Composition**

<table>
<thead>
<tr>
<th>Product</th>
<th>Weight Percent (nominal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lanthanum Oxide Nanopowder</td>
<td>99.9%</td>
</tr>
<tr>
<td>Other Metal</td>
<td>750ppm</td>
</tr>
</tbody>
</table>

**Applications**

- Magnetic data storage and magnetic resonance imaging (MRI)
- In biosensors
- For phosphate removal in bio medical and water treatment
- In laser crystals and optics
- Improve product energy conversion efficiency
- High-refraction optical fibers, precision optical glasses, and other alloy materials
- Cathode layer of solid oxide fuel cells (SOFC)
- Automobile exhaust catalysts
- Improve the burning rate of propellants
- In light-converting agricultural films