COBALT OXIDE NANOPOWDER

Purity 99.9%

$\text{Co}_3\text{O}_4$

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Cobalt oxide nanoparticles have potential applications in lithium-ion batteries and electronic gas sensors. Cobalt oxide particles may be anchored on substrates such as graphene to improve the dimensional stability of the anode and to prevent particle aggregation during lithium charge and discharge processes. The unique properties of cobalt oxide nanoparticles see them used and experimented with in a number of electronic applications, including semiconductors, superconductors, electronic ceramics, lithium ion batteries, electro chromic devices, and solar energy absorbers. As is the case for many nanomaterials, cobalt oxide nanopowders have been utilized as catalysts and catalyst carriers for a variety of reasons. Most notably, they're useful in organic synthesis, in heterogeneous catalysts, and as an electro active catalyst material.

**Quick Facts**

- **Product**: Cobalt Oxide Nanopowder
- **Stock No**: NS6130-03-307
- **CAS**: 1308-06-1
- **Color**: Black
- **Form**: Powder
- **Symbol**: Co₃O₄
- **Group**: Cobalt 9/Oxygen 16
- **Electronic Configuration**: Cobalt [Ar] 3d⁷ 4s²/Oxygen [He] 2s² 2p⁴

**Addition Powder Characteristics**

<table>
<thead>
<tr>
<th>Stock No.</th>
<th>Purity</th>
<th>APS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NS6130-03-307</td>
<td>99.9%</td>
<td>&lt;80nm</td>
</tr>
<tr>
<td>NS6130-03-308</td>
<td>99.9%</td>
<td>20nm</td>
</tr>
</tbody>
</table>

**Technical Specification**

- **Molecular Formula**: Co₃O₄
- **Molecular Weight**: 240.80 g/mol
- **Density**: 6.1 g/cm³
- **Melting Point**: 895 °C

**Chemical Composition**

<table>
<thead>
<tr>
<th>Product</th>
<th>Weight Percent (nominal)</th>
<th>Other Metal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cobalt Oxide Nanopowder</td>
<td>99.9%</td>
<td>1000ppm</td>
</tr>
</tbody>
</table>

**Applications**

- As catalyst and catalyst carriers
- As an electrode active materials
- For glass, porcelain colorants and pigments
- Chemical industry oxidants
- Senior goggles and other filter materials
- As carbides
- In temperature and gas sensors
- In electro chromic devices