

Nickel(II) Oxide

Nickel oxide powder in green and black grades for catalysts, ceramics and specialty materials.

CAS No. 1313-99-1	EC / List No. 215-215-7	Transport Non-dangerous goods
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Product Information

Nickel(II) oxide is an inorganic nickel oxide with formula NiO and molecular weight 74.69 g/mol. Commercial green and black grades can differ in powder characteristics and process behavior, so grade selection should use both the specified impurity profile and particle size.

Specifications

Parameter	Specification
Grade order	Green / Black
Purity, both grades	≥99.0 %
Nickel, by grade	>76 / ≥76 %
Cobalt, by grade	≤0.0001 / ≤0.0002 %
Copper, both grades	≤0.0001 %
Zinc, both grades	≤0.0001 %
Iron, by grade	≤0.002 / ≤0.001 %
Manganese, both grades	≤0.0001 %
Calcium, by grade	≤0.0038 / ≤0.0073 %
Sodium, by grade	≤0.02 / ≤0.058 %
Silicon, black grade	≤0.0146 %
HCl-insoluble material, by grade	≤0.0001 / ≤0.001 %
Particle-size D50, by grade	4–5 / 5–6 μm

Grade-dependent limits follow Green / Black order. Silicon control is assigned to the black grade only. The green reference density is 6.67 at 20/4°C; no black density or green silicon limit is invented.

Typical Properties

Property	Typical Value
Molecular formula	NiO
Molecular weight	74.69 g/mol

Applications

Catalyst preparation: Nickel oxide precursor for selected hydrogenation and other industrial catalysts. Evaluate reduction or activation behavior, nickel loading, impurity tolerance and support compatibility.

Ceramics, glass and pigments: Nickel-containing component for compatible ceramic, glass and pigment systems. Assess firing conditions, color development and distribution in the complete formulation.

Electrochemical and specialty materials: Starting powder for selected nickel-containing electrochemical and specialty-material processes. Qualify particle size, purity and conversion behavior against the final material requirements.

Packaging / Storage

Item	Information
Packing	25 kg lined bags / 1,000 kg bulk bags
Storage	Store tightly closed in a cool, dry, ventilated place with controlled access. Keep separate from strong acids, peroxides and fluorine; protect from moisture and cross-contamination.
Handling	Use enclosed handling and local extraction to prevent nickel exposure. Wear suitable chemical-resistant gloves, protective clothing and eye protection. Use respiratory protection where the exposure assessment requires it. Keep contaminated work clothing separate and prevent releases to drains.

Company Contact

Supplier	Hainan Zhongxin Chemical Co., Ltd. (ZXCHEM)
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