

Basic Nickel(II) Carbonate

Controlled nickel-content inorganic raw material for catalyst, plating, ceramics and nickel-compound production.

CAS No. 12607-70-4	EC / List No. 235-715-9	Transport Class 9 — Environmentally hazardous
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Product Information

Basic Nickel(II) Carbonate is a basic nickel carbonate hydroxide material supplied as light green powder. Its hydrate composition can vary, so the formula includes variable water and the molecular weight shown is on an anhydrous basis. Nickel content, rather than a fixed hydrate molecular weight, is the key commercial specification.

Specifications

Parameter	Specification
Appearance	Light green powder
Nickel	≥42 %
Cobalt	≤0.05 %
Sodium	≤0.1000 %
Copper	≤0.0005 %
Residual insolubles — legacy source entry	≤0.0200 %
Sulfate	≤0.0100 %
Chloride	≤0.0050 %
Relative density, source reference at 20/4°C	2.6
Sensitivity, source reference	Ammonia / acids

Limits follow the local 2026 ZXCHEM TDS. Its insolubles entry is labelled water-insoluble substances despite the base material being poorly water-soluble; retain the quoted limit as a source test entry rather than a claim of bulk water solubility. Hydration varies; molecular weight is anhydrous basis.

Typical Properties

Property	Typical Value
Molecular formula	$\text{NiCO}_3 \cdot 2\text{Ni}(\text{OH})_2 \cdot x\text{H}_2\text{O}$
Molecular weight	304.12 g/mol (anhydrous basis)

Applications

Nickel catalyst preparation: Controlled nickel-content raw material for producing supported catalysts and other nickel-containing catalyst precursors. Evaluate impurity tolerance, dissolution procedure and intended metal loading.

Plating and nickel-salt chemistry: Nickel source for selected surface-treatment processes and nickel-salt manufacture. Match trace-metal limits and reaction conditions to the required bath or downstream chemical specification.

Ceramics and battery-material precursors: Inorganic nickel source for selected ceramic pigments and nickel-containing material development. Assess particle handling, purity and process compatibility for the particular final material.

Packaging / Storage

Item	Information
Packing	25 kg bags / 1,000 kg bags
Storage	Store tightly sealed in a cool, dry, ventilated area. Restrict access to trained personnel and segregate acids, ammonia and incompatible oxidizers; prevent releases of metal-containing dust.
Handling	Use enclosed powder transfer and effective local extraction. Wear suitable protective gloves, eye protection and protective clothing; select particulate respiratory protection when required by the exposure assessment. Avoid all unnecessary nickel-dust exposure.

Company Contact

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