



>>Entry Name: Nickel(II) oxide (NiO), 9CI

Synonym(s): Bunsenite

CAS Registry Number: 1313-99-1

Related CAS Registry Numbers(s): 11099-02-8

NiO

Molecular Formula: NiO

Molecular Weight: 74.689

Accurate Mass: 73.930261

Percentage Composition: Ni 78.58%; O 21.42%

Source/Synthesis: Obt. by heating Nickel(II) carbonate (NiCO_3) [JCB86-P](#), Nickel(II) hydroxide (Ni(OH)_2) [JCB95-R](#). Thin amorphous films with electrochromic props. synth. by cvd using Ni(acac)_2 as precursor in air at temp. $>250^\circ$

Use/Importance: Commercially available. Has applications in catalysis, ceramics, coatings, electrodes, glasses etc. When finely divided, can be oxidised to higher oxides of uncertain and variable composition. Potential use as secondary component in electrochromic window device

Physical Description: Dark green cryst.

Melting Point: Mp 1984°

Solubility: Insol. H_2O ; sol. acids, NH_3 aq.

Other Data: Antiferromagnetic

Aldrich: 39952-3

Fluka: 72257

References:

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Estrada, W. *et al.*, *J. Appl. Phys.*, 1988, **64**, 3678, (*electrochem, optical props, electrochromism*)

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