



>>Entry Name: Neptunium(IV) oxide (NpO₂)

CAS Registry Number: 12035-79-9

Related CAS Registry Numbers(s): 58670-16-9

NpO₂

Molecular Formula: NpO₂

Molecular Weight: 269.047

Accurate Mass: 269.037997

Percentage Composition: Np 88.11%; O 11.89%

Source/Synthesis: Synth. by heating Np compds. in air at 700-800°

Physical Description: Yellow-green solid

Melting Point: Mp 2510-2610°

Other Data: $\mu_{\text{eff}} = 2.95\mu_{\text{B}}$, $\theta = 125^\circ$ (below 300K), $\mu_{\text{eff}} = 3.25\mu_{\text{B}}$, $\theta = 181^\circ$ (above 300K)

References:

Dunlop, B.D. *et al.*, *J. Phys. Chem. Solids*, 1965, **29**, 1365, (*magnetism*)

Ross, J.W. *et al.*, *J. Appl. Phys.*, 1967, **38**, 1451, (*magnetism*)

Cox, D.E. *et al.*, *J. Phys. Chem. Solids*, 1967, **28**, 1649, (*nd, magnetism*)

Heaton, L. *et al.*, *J. Phys. Chem. Solids*, 1967, **28**, 1651, (*nd, magnetism*)

Fahey, J.A. *et al.*, *Inorg. Nucl. Chem. Lett.*, 1974, **10**, 459, (*cryst struct*)

Brauer, G., *Handbuch Prap. Anorg. Chem.*, 3rd edn., Ferdinand Enke Verlag, 1975, **2**, 1271, (*synth*)

Filin, V.M. *et al.*, *Radiokhimiya*, 1976, **18**, 166, (*Mössbauer*)