



>>Entry Name: Silver(*I,III*) oxide (AgO)

Synonym(s): Argentic oxide. Silver peroxide (incorr.). Silver suboxide. Dirasil

CAS Registry Number: 1301-96-8

Extra CAS Registry Numbers(s): 11113-88-5 25455-73-6

$\text{Ag}^{\text{I}}\text{Ag}^{\text{III}}\text{O}_2$

Molecular Formula: AgO

Molecular Weight: 123.868

Accurate Mass: 122.900007

Use/Importance: Used in manuf. of silver oxide-zinc alkali batteries. Commercially available

Physical Description: Charcoal grey powder. Malleable

Solubility: Insol. H₂O; sol. alkalis, [NH₄]OH (with dec.)

Other Data: Dec. >100° into silver and oxygen; semiconductor; diamagnetic; strong oxidising agent

Hazard & Toxicity: Avoid contact with skin, organic matter, strong ammonia and alkalis

Aldrich: 22363-8

Fluka: 85262

References:

Watson, E.R., *J.C.S.*, 1906, 578, (*synth*)

Neiding, A.B., *Dokl. Akad. Nauk SSSR*, 1951, **78**, 713, (*magnetism*)

Inorg. Synth., 1953, **4**, 12, (*synth*)

Graff, W.S. *et al.*, *J. Electrochem. Soc.*, 1958, **105**, 446, (*synth*)

McMillan, J.A., *J. Inorg. Nucl. Chem.*, 1960, **13**, 28, (*theory, conductivity, cryst struct*)

Scatturin, V. *et al.*, *Ric. Sci.*, 1960, **30**, 1034, (*nd*)

McMillan, J.A., *Chem. Rev.*, 1962, **62**, 65, (*rev*)

Dirske, T.P., *J. Electrochem. Soc.*, 1964, **108**, 813, (*use*)

Chem. Eng. News, 1969, **47**, 32, (*synth, single cryst*)

Brauer, G., *Handbuch Prap. Anorg. Chem.*, 3rd edn., Ferdinand Enke Verlag, 1975, **2**, 998, (*synth*)

Merck Index, 11th edn., 1989, No. 8469