



>>Entry Name: Lead(II) oxide (PbO), 9CI

Synonym(s): Lead monoxide

CAS Registry Number: 1317-36-8

PbO

Molecular Formula: OPb

Molecular Weight: 223.199

Accurate Mass: 223.971542

Percentage Composition: O 7.17%; Pb 92.83%

Source/Synthesis: Pure compd. is synth. from Pb(OAc)₂ and NH₄OH

Use/Importance: Used for plates in electric storage batteries of the lead sulfuric acid type. Widely used in optical, electrical, and electronic glasses

Melting Point: Mp 897°

Solubility: Insol. H₂O, EtOH; sol. AcOH

Other Data: Other lead oxides are listed under Lead oxide (Pb₂O₃) [KBS41-J](#), Lead oxide (Pb₃O₄) [KBS14-D](#) and Lead(IV) oxide (PbO₂) [KBS44-M](#)

Hazard & Toxicity: Toxic. LD_{Lo} (rat, ipr) 430 mg/kg

Aldrich: 20361-0

Fluka: 15338

Sigma: L4281

Other: Gelest PBL6380

>>Variant: Tetragonal-form

Synonym(s): Litharge

Molecular Formula: OPb

Molecular Weight: 223.199

Accurate Mass: 223.971542

Percentage Composition: O 7.17%; Pb 92.83%

opposite

Source/Synthesis: Prepd. by treating PbO₂ in air to 550°. Also mineral from e.g. California, Greece

Physical Description: Red to reddish-yellow tetragonal cryst.

>>Variant: Orthorhombic-form

Synonym(s): Massicot

Molecular Formula: OPb

Molecular Weight: 223.199

Accurate Mass: 223.971542

Percentage Composition: O 7.17%; Pb 92.83%

Source/Synthesis: Mineral: oxidation product of primary lead minerals esp. in association with galena

Physical Description: Yellow cryst., stable from above 489°; metastable at r.t. Amphoteric

References:

Leciejewicz, J., *Acta Cryst.*, 1961, **14**, 1304, (*cryst struct, tetragonal-form*)

Kwestroo, W. *et al.*, *J. Inorg. Nucl. Chem.*, 1965, **27**, 1951; 1967, **29**, 39, (*synth*)

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Khanna, R.K. *et al.*, *Spectrochim. Acta A*, 1986, **42**, 603, (*ir, Raman*)

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