



>>Entry Name: Lead carbonate hydroxide

Synonym(s): Basic lead(II) carbonate. White lead. Bis[carbonato(2-)]dihydroxytrilead, 9CI. C.I. Pigment White 1

CAS Registry Number: 1319-46-6

$2\text{PbCO}_3 \cdot \text{Pb}(\text{OH})_2$

Molecular Formula: $\text{C}_2\text{H}_2\text{O}_8\text{Pb}_3$

Molecular Weight: 775.633

Accurate Mass: 777.904851

Percentage Composition: C 3.10%; H 0.26%; O 16.50%; Pb 80.14%

Source/Synthesis: Prepd. by treating $\text{Pb}(\text{OAc})_2$ with CO_2

Use/Importance: Was the most important white pigment used in paints but has now been largely replaced by TiO_2

Physical Description: Cryst.

Melting Point: Mp 400 dec.°

Solubility: Insol. H_2O , EtOH

Hazard & Toxicity: Toxic. LD_{Lo} (gpg, orl) 1000 mg/kg

Aldrich: 24358-2

Fluka: 15323

Other: Gelest PBL6210

>>Variant: Mineral-form

Synonym(s): Hydrocerussite

CAS Registry Number: 1319-47-7

Molecular Formula: $\text{C}_2\text{H}_2\text{O}_8\text{Pb}_3$

Molecular Weight: 775.633

Accurate Mass: 777.904851

Percentage Composition: C 3.10%; H 0.26%; O 16.50%; Pb 80.14%

Source/Synthesis: Occurs as a secondary mineral in oxidised ore

Physical Description: Grey, white to colourless trigonal cryst.

References:

Lemke, A. *et al.*, *Z. Anorg. Allg. Chem.*, 1934, **220**, 312, (*synth*)

Dana's System of Mineralogy, 7th Ed., Wiley, N.Y., 1951, **2**, 270, (*mineral*)

Olby, J.K., *J. Inorg. Nucl. Chem.*, 1966, **28**, 2507, (*cryst struct*)

Andreeva, V.N. *et al.*, *Zh. Neorg. Khim.*, 1970, **15**, 2089; *CA*, **73**, 115181c, (*synth*)

Kirk-Othmer Encycl. Chem. Technol., 3rd edn., Wiley, 1978, **14**, 171, (*rev*)

Brooker, M.H. *et al.*, *Can. J. Chem.*, 1983, **61**, 494, (*ir, Raman*)