



**>>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  $\text{CO}_2$

**Use/Importance:** Was the most important white pigment used in paints but has now been largely replaced by  $\text{TiO}_2$

**Physical Description:** Cryst.

**Melting Point:** Mp 400 dec.°

**Solubility:** Insol.  $\text{H}_2\text{O}$ , EtOH

**Hazard & Toxicity:** Toxic.  $\text{LD}_{50}$  (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*)