



>>Entry Name: Lead(II) fluoride (PbF₂)

Synonym(s): Lead difluoride

CAS Registry Number: 7783-46-2

PbF₂

Molecular Formula: F₂Pb

Molecular Weight: 245.197

Accurate Mass: 245.973433

Percentage Composition: F 15.50%; Pb 84.50%

Use/Importance: Starting material for solid state lasers

Melting Point: Mp 855°

Boiling Point: Bp 1290°

Solubility: Sl. sol. H₂O, sol. HNO₃; insol. NH₃, Me₂CO

Hazard & Toxicity: Poisonous. LD_{Lo} (gpg, scu) 2800 mg/kg

Aldrich: 23615-2

Fluka: 15330

Other: Gelest PBL6285

>>Variant: α-form

Molecular Formula: F₂Pb

Molecular Weight: 245.197

Accurate Mass: 245.973433

Percentage Composition: F 15.50%; Pb 84.50%

Physical Description: Colourless orthorhombic cryst.

>>Variant: β-form

Synonym(s): High temp-form

Molecular Formula: F₂Pb

Molecular Weight: 245.197

Accurate Mass: 245.973433

Percentage Composition: F 15.50%; Pb 84.50%

References:

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Kofuji, Y. *et al.*, *Koen Yoshishu - Kotai Ionikusu Toronkai*, 7th, 1979, 1979, 23, (cryst struct)

Lundin, A.G. *et al.*, *Magn. Reson. Relat. Phenom. Proc. Congr. AMPERE*, 20th, 1978, 1978, 1979, 107, (Pb-207 nmr)

Bendow, B. *et al.*, *J. Am. Ceram. Soc.*, 1984, **67**, C136, (ir, Raman)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, LDF000