



>>Entry Name: **Mercury(II) sulfate (Hg₂SO₄)**

Synonym(s): Mercurous sulfate. Sulfuric acid mercury (1:2) salt

CAS Registry Number: 7783-36-0

Related CAS Registry Numbers(s): 13766-44-4

[Hg-Hg-OSO₂OHg-Hg-OSO₂O]_n

Molecular Formula: Hg₂O₄S

Molecular Weight: 497.244

Accurate Mass: 499.892964

Percentage Composition: Hg 80.68%; O 12.87%; S 6.45%

Source/Synthesis: Synth. from Hg₂(NO₃)₂ and H₂SO₄ (or Na₂SO₄) or from Hg and H₂SO₄

Use/Importance: Electrode. Esterification catalyst

Physical Description: Colourless monoclinic prisms, gradually dec. by H₂O, forming yellow Hg₂SO₄·Hg₂O·H₂O, darkens on exposure to light, melts to deep red-brown liq.

Solubility: Sl. sol. H₂O (0.06 g per 100 cm³ at 25°)

Other Data: Dec. to Hg and HgSO₄. K_{sp} 4.7 x 10⁻⁷ (at 25°)

Aldrich: 44289-5

Fluka: 83371

References:

Sunmere, D.B. *et al.*, *Trans. Electrochem. Soc.*, 1929, **56**, 143, (*synth*)

Dorm, E., *Acta Chem. Scand.*, 1967, **21**, 1661; 1969, **23**, 1607, (*struct*)

Stammreich, H. *et al.*, *J. Mol. Struct.*, 1967, **1**, 55, (*Raman, solid*)

Gmelin Handbook Inorg. Chem., Syst. No. 34, 1968, **B3**, 1005, (*bibl, rev*)

Adams, D.M. *et al.*, *J. Raman Spectrosc.*, 1976, **5**, 63, (*Raman, solid*)

Nefedov, V.I. *et al.*, *Zh. Neorg. Khim.*, 1979, **24**, 2564, (*pe*)

Tariq, S.A. *et al.*, *J. Therm. Anal.*, 1981, **21**, 277, (*thermal anal*)

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