



>>Entry Name: Mercury(II) fluoride (Hg<sub>2</sub>F<sub>2</sub>)

Synonym(s): Mercurous fluoride

CAS Registry Number: 13967-25-4

F-Hg-Hg-F

Molecular Formula: F<sub>2</sub>Hg<sub>2</sub>

Molecular Weight: 439.177

Accurate Mass: 441.93804

Percentage Composition: F 8.65%; Hg 91.35%

Source/Synthesis: Synth. from: Hg<sub>2</sub>(NO<sub>3</sub>)<sub>2</sub> and NaF; or Hg<sub>2</sub>CO<sub>3</sub> and HF; or Hg<sub>2</sub>Cl<sub>2</sub> + AgF

Use/Importance: Used as a fluorinating agent. Used in acoustooptical devices

Physical Description: Tetragonal yellow cryst.; dec. in H<sub>2</sub>O at 15°, darkens on exposure to light

Melting Point: Mp 570°

Solubility: V. sol. H<sub>2</sub>O, which results in hydrol. to Hg, HgO and HF

Aldrich: 33931-8

>>Derivative: "Monomer"

Molecular Formula: FHg

Molecular Weight: 219.588

Accurate Mass: 220.96902

Percentage Composition: F 8.65%; Hg 91.35%

#### References:

- Ebert, F. *et al.*, *Z. Anorg. Allg. Chem.*, 1933, **210**, 269, (*cryst struct*)  
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Stammreich, H. *et al.*, *J. Mol. Struct.*, 1967, **1**, 55, (*Raman*)  
Gabuda, S.P. *et al.*, *Spectrosc. Lett.*, 1968, **1**, 421, (*pmr, F-19 nmr, powder struct*)  
Deb, S.K. *et al.*, *Phys. Rev. B*, 1970, **2**, 5003, (*uv-vis*)  
Dorm, E., *Chem. Comm.*, 1971, 466, (*cryst struct*)  
*Kirk-Othmer Encycl. Chem. Technol.*, 3rd edn., Wiley, 1978, **10**, 763  
Wurtinger, W. *et al.*, *Z. Phys. A*, 1979, **293**, 219, (*Mössbauer*)  
Kleier, D.A. *et al.*, *J.A.C.S.*, 1980, **102**, 6909, (*theory*)  
Laubach, S. *et al.*, *Hyperfine Interact.*, 1985, **23**, 259, (*Hg-199 Mössbauer*)