



>>Entry Name: Ammonium fluoride, 9CI

CAS Registry Number: 12125-01-8
NH₄F

Molecular Formula: FH₄N

Molecular Weight: 37.037

Accurate Mass: 37.032777

Percentage Composition: F 51.30%; H 10.89%; N 37.82%

General Statement: Normally has the wurtzite struct. Several high-pressure forms are known

Source/Synthesis: Prepd. from NH₃ gas + 40% HF or by heating NH₄Cl + NaF

Use/Importance: Used in etching and frosting glass. Commercially available

Physical Description: White deliquescent cryst.

Solubility: V. sol. H₂O; sl. sol. EtOH

Other Data: On heating dec. to NH₃ and HF. Attacks glass

Hazard & Toxicity: Toxic

Aldrich: 21601-1

Fluka: 9734

Sigma: A8295

References:

Mellor Compr. Treat. Inorg. Theor. Chem., 1964, **8/I**, 370, (rev)

Brauer, G., *Handb. Prep. Inorg. Chem.*, 2nd edn., Academic Press, 1965, **1**, 183, (synth)

Adrian, H.W.W. *et al.*, *Acta Cryst. A*, 1969, **25**, 438, (cryst struct)

Nabor, M.A. *et al.*, *J. Chem. Phys.*, 1969, **51**, 1353, (polymorphs)

Kirk-Othmer Encycl. Chem. Technol., 3rd edn., Wiley, 1978, **10**, 675

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, ANH250