



>>Entry Name: Ammonium hydrogen fluoride

Synonym(s): Ammonium fluoride compd. with hydrogen fluoride (1:1). Ammonium hydrogen bifluoride. Ammonium fluoride ((NH₄)(HF₂)), 9Cl, 8Cl. Ammonium bifluoride

CAS Registry Number: 1341-49-7

Related CAS Registry Numbers(s): 7790-15-0 14055-61-9 16941-26-7 19121-60-9 96740-33-9 120144-37-8

[NH₄][F-H-F]

Molecular Formula: F₂H₅N

Molecular Weight: 57.043

Accurate Mass: 57.039005

Percentage Composition: F 66.61%; H 8.83%; N 24.55%

General Statement: Orthorhombic

Source/Synthesis: Synth. from NH₃ + HF (anhyd.)

Use/Importance: Commercially available. Used in manuf. of Mg and Mg alloys; in brightening Al; in glass and porcelain industries; in lab. production of HF

Physical Description: Colourless cryst.

Melting Point: Mp 126°

Boiling Point: Bp 239°

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

Other Data: *n*_D 1.390

Hazard & Toxicity: Corrosive, strong irritant, emits toxic fumes on heating

Aldrich: 22482-0

Fluka: 9835

References:

Aldrich Library of FT-IR Spectra, 1st edn., 1985, 2, 1247C, (ir)

Mellor Compr. Treat. Inorg. Theor. Chem., Longman, London, Part 1, 1964, 8/I, 370, (rev)

Kirk-Othmer Encycl. Chem. Technol., 3rd edn., Wiley, 1978, 10, 676, (rev)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials, 8th edn., Van Nostrand Reinhold, 1992, ANJ000; ANJ250*