



>> **Name: Ammonium thiocyanate (NH₄SCN)**

Synonym(s): Ammonium sulfocyanate. Ammonium rhodanide

CAS Registry Number: 1762-95-4

Related CAS Registry Numbers(s): 36700-77-3

[NH₄]SCN

Molecular Formula: CH₄N₂S

Molecular Weight: 76.122

Accurate Mass: 76.009518

Percentage Composition: C 15.78%; H 5.30%; N 36.80%; S 42.12%

Source/Synthesis: Prepd. e.g. by boiling aq. NH₄CN with S, by reaction of NH₃ with CS₂, etc.

Use/Importance: Intermediate in the synth. of herbicides; stabilising agent used in photography and glue manuf.; commercially available

Physical Description: Deliquescent, colourless cryst. Rearranges on heating to an equilib. mixt. with thiourea

Melting Point: Mp 149°

Solubility: V. sol. H₂O, EtOH; sol. MeOH, Me₂CO; prac. insol. CHCl₃, EtOAc

Other Data: Hygroscopic

Hazard & Toxicity: Poison by ingestion

Aldrich: 22198-8

Fluka: 9950

Sigma: A7149

Other: PB: A30640

References:

Aldrich Library of FT-IR Spectra, 1st edn., 1985, **2**, 1270B, (*ir*)

Gmelin Handbook Inorg. Chem., Syst. No. 23, 1936, 372, (*rev*)

Tramer, A., *C. R. Hebd. Seances Acad. Sci.*, 1959, **249**, 2755, (*ir, Raman*)

Bats, J.W. *et al.*, *Acta Cryst. B*, 1977, **33**, 1542, (*cryst struct*)

Kirk-Othmer Encycl. Chem. Technol., 3rd edn., Wiley, 1978, **22**, 156, (*rev*)

Dickson, R.M. *et al.*, *Can. J. Chem.*, 1987, **65**, 941, (*cmr, N-15 nmr*)

Merck Index, 11th edn., 1989, No. 591

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials, 8th edn.*, Van Nostrand Reinhold, 1992, ANW750