



>>Derivative: Sr salt

>>Derivative: Ba salt

>>Derivative: Di-NH₄ salt

Synonym(s): Ammonium sulfate

CAS Registry Number: 7783-20-2

Molecular Formula: H₈N₂O₄S

Molecular Weight: 132.14

Accurate Mass: 132.020478

Percentage Composition: H 6.10%; N 21.20%; O 48.43%; S 24.27%

Use/Importance: Nitrogen fertiliser. Important industrial chemical, USA production in 1999 2.90 million tons

Physical Description: White rhombic cryst.

Melting Point: Mp 513° (sealed tube)

Solubility: V. sol. H₂O

Aldrich: 20450-1

Fluka: 9982

Sigma: J6232

References:

Aldrich Library of FT-IR Spectra, 1st edn., 1985, **2**, 1261B, (*ir*)

Mellor Compr. Treat. Inorg. Theor. Chem., 1930, **10**, 351, (*rev*)

Ingold, C.K. *et al.*, *J.C.S.*, 1936, 915, (*synth, D₂SO₄*)

Gillespie, R.J. *et al.*, *Adv. Inorg. Chem. Radiochem.*, 1959, **1**, 386, (*use, rev*)

Gmelin Handbook Inorg. Chem., Syst. No. 9, 1960, **B2**, 622, (*rev, bibl*)

Inorg. Synth., 1960, **6**, 121, (*synth, D₂SO₄, props*)

Fieser and Fieser's Reagents for Organic Synthesis, Wiley, 1967, **1**, 470; 1979, **7**, 347; 1981, **9**, 441; 1977, **6**, 558; 1975, **5**, 633, (*uses*)

Compr. Inorg. Chem., Pergamon, Oxford, 1973, **2**, 869, (*rev*)

Brauer, G., *Handbuch Prap. Anorg. Chem.*, 3rd edn., Ferdinand Enke Verlag, 1975, **1**, 150, (*synth, D₂SO₄*)

Kirk-Othmer Encycl. Chem. Technol., 3rd edn., Wiley, 1978, **22**, 190, (*manuf*)

Encyclopedia of Food and Color Additives, (ed. Burdock, G.A.), CRC Press, 1997, 145-146; 2708-2709

Pesticide Manual, 12th edn., 2000, No. 717

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, ANU750; SOI500; SOI520; SOI530