



>>Entry Name: Sodium thiocyanate

Synonym(s): Thiocyanic acid, sodium salt, 8Cl. Sodium sulfocyanate. Sodium rhodanide

CAS Registry Number: 540-72-7

NaSCN

Molecular Formula: CNNaS

Molecular Weight: 81.073

Accurate Mass: 80.964911

Percentage Composition: C 14.81%; N 17.28%; Na 28.36%; S 39.55%

Source/Synthesis: Manuf. either by treatment of polysulfides (Na_2S_n) with NaCN or HCN or by heating NaSH with $(\text{NH}_2)_2\text{CNCN}$, or by reaction of sodium metal with thiourea

Use/Importance: Commercially available. Used in thiocyanation reactions. Used in the electroplating industry and as a constituent of working fluids for energy storage and power generation. Aq. solns. are used in the final stages of the production of acrylic fibres

Physical Description: Colourless orthorhombic deliquescent cryst.

Melting Point: Mp 287°

Solubility: V. sol. H_2O (139 g per 100 cm^3 at 21°; 225 g per 100 cm^3 at 100°); EtOH, Me_2CO

Other Data: $\Delta H_f^\circ -174 \text{ kJ mol}^{-1}$

Hazard & Toxicity: Toxic; irritant

Aldrich: 25141-0

Fluka: 71938

Sigma: S7757

References:

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Van Rooyen, P.H. *et al.*, *Acta Cryst. B*, 1975, **31**, 2933, (*struct*)

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Tabeta, R. *et al.*, *Bull. Chem. Soc. Jpn.*, 1986, **59**, 1957, (*Na-23 nmr*)

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