



>>Entry Name: Sodium disilicate (Na₂Si₂O₅)

Synonym(s): Disodium silicate (Na₂Si₂O₅)

CAS Registry Number: 13870-28-5

Na₂Si₂O₅

Molecular Formula: Na₂O₅Si₂

Molecular Weight: 182.147

Accurate Mass: 181.907963

Percentage Composition: Na 25.24%; O 43.92%; Si 30.84%

Source/Synthesis: Synth. by fusing quartz sand with Na₂CO₃

Use/Importance: Crystalline layered silicate has water-softening capabilities esp. efficient in removal of Ca, less so Mg

Physical Description: Cryst. Also exists as a glass

Melting Point: Mp 874°

Solubility: Sol. H₂O

References:

Schwarz, R. *et al.*, *Ber.*, 1924, **57**, 1477, (*synth*)

Pant, A.K. *et al.*, *Acta Cryst. B*, 1968, **24**, 13; 1077, (*cryst struct*)

Hofmann, W. *et al.*, *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.*, 1969, **129**, 396, (*cryst struct*)

Magi, M. *et al.*, *J. Phys. Chem.*, 1984, **88**, 1518, (*Si-29 nmr*)

Stebbins, J.F. *et al.*, *Nature (London)*, 1985, **314**, 250, (*nmr, molten*)

Coker, E.N. *et al.*, *J. Mater. Chem.*, 1993, **3**, 523, (*soly, use*)