



>>Entry Name: Silicic acid (H₂SiO₃), 9CI

Synonym(s): Metasilicic acid

CAS Registry Number: 7699-41-4

Related CAS Registry Numbers(s): 15593-90-5

H₂SiO₃

Molecular Formula: H₂O₃Si

Molecular Weight: 78.1

Accurate Mass: 77.977322

Percentage Composition: H 2.58%; O 61.46%; Si 35.96%

Source/Synthesis: Synth. by partial dehydration of H₄SiO₄ with H₂SO₄ aq. or Me₂CO

Use/Importance: Commercially available

Physical Description: White amorph. powder

Solubility: Insol. H₂O

Aldrich: 28877-2

Sigma: S9013

>>Derivative: Di-Na salt; compd. with H₂O₂ (1:3)

Synonym(s): Disodium silicate peroxohydrate

CAS Registry Number: 33335-75-0

Molecular Formula: H₆Na₂SiO₉

Molecular Weight: 224.107

Percentage Composition: H 2.70%; Na 20.52%; Si 12.53%; O 64.25%

Physical Description: Colourless orthorhombic cryst.

>>Variant: Gel-form

Synonym(s): Hydrogenosilsesquioxane

CAS Registry Number: 44234-98-2

Molecular Formula: [HO_{1.5}Si]

Molecular Weight: 53.093

Percentage Composition: H 1.90%; O 45.20%; Si 52.90%

Source/Synthesis: Synth. by hydrol. of either HSiCl₃ or HSi(OEt)₃

Solubility: Insol.

References:

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Zhinkinn, D.Ya. *et al.*, *Zh. Obshch. Khim.*, 1968, **38**, 2800, (*synth, gel-form*)
Rietz, G. *et al.*, *Z. Anorg. Allg. Chem.*, 1971, **384**, 31; 37; **382**, 19, (*deriv, cryst struct, tga*)
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Blum, A.Y., *CA*, 1984, **100**, 166923, (*ir*)
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Nyman, M.D. *et al.*, *Chem. Mater.*, 1993, **5**, 1636, (*use, cvd*)
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