>>**Entry Name: Sodium silicate (Na_2SiO_3)**
ENTRY UNDER REVIEW
Synonym(s): Sodium metasilicate (Na_2SiO_3). Waterglass

CAS Registry Number: 6834-92-0
Related CAS Registry Numbers(s): 1344-09-8 15859-24-2

Na_2SiO_3

Molecular Formula: Na_2O_3Si
Molecular Weight: 122.063
Accurate Mass: 121.941206
Percentage Composition: Na 37.67%; O 39.32%; Si 23.01%

Source/Synthesis: Usually prepd. by fusing sand (SiO_2) and soda ash (Na_2CO_3)
Use/Importance: Used for corrosion inhibition and in enzymic detergents. Important industrial chemical, 45th in order of volume for USA in 1990 (production 0.88 million tons/year)
Physical Description: Usually a glass, also cryst.
Melting Point: Mp 1089°
Solubility: Sol. H_2O; insol. EtOH
Hazard & Toxicity: A skin irritant

Aldrich: 30781-5
Fluka: 71744

>>**Derivative:** Pentahydrate

CAS Registry Number: 10213-79-3
Molecular Formula: $H_{10}Na_2O_8Si$
Molecular Weight: 212.139
Accurate Mass: 211.994031
Percentage Composition: H 4.75%; Na 21.67%; O 60.34%; Si 13.24%
Source/Synthesis: Prepd. by dehydrating the nonahydrate at 17 mmHg at 85-90°
Physical Description: Cryst.
Fluka: 71746
Sigma: S3514

>>**Derivative:** Octahydrate

CAS Registry Number: 27121-04-6

>>**Derivative:** Nonahydrate

CAS Registry Number: 13517-24-3
Source/Synthesis: Prepd. from waterglass + aq. NaOH
Physical Description: Efflorescent platelets (2-3% aq. NaOH)
Melting Point: Mp 48°
Solubility: V. sol. H_2O
Sigma: S5904

References:

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