

NASIL®

Sodium silicates in lumps or in solution



n° CAS 1344-09-8

n° EINECS 215-687-4

■ CHEMICAL NATURE

Sodium silicates are obtained by fusing quartz sand and sodium carbonate at high temperatures. In the solid state they are amorphous and look like glass. They dissolve in water (waterglass) to afford colloidal solutions of an alkaline nature.

■ TECHNICAL DATA

Mean values					
• Amorphous solids or lumps					
Product	SiO ₂ /Na ₂ O Weight ratio	%Na ₂ O	%SiO ₂	Density (g/l)	
NASIL® C/3.35	3.4	22.5	76.5	1357	
NASIL® C/2.0	2.0	33.5	66.5	1357	
• Aqueous solution					
Product	SiO ₂ /Na ₂ O Weight ratio	%Na ₂ O	%SiO ₂	Density at 20 °C (° Bé)	Viscosity at 20 °C (cP)
NASIL® 3.5	3.5	7.5	26.0	35-37	60
NASIL® 3.35	3.35	8.0	26.4	37-39	80-100
NASIL® 3.0	3.0	8.5	25.5	39-40	80-100
NASIL® 50	2.4	13.3	32.5	48-50	800
FUNSIL®	2.3	13.0	31.3	49-50	700
NASIL® 45	2.0	13.0	26.0	45-47	100
NASIL® 58	2.0	17.5	35.5	58-60	9000
NASIL® 52.5	1.6	17.5	27.5	52-53	600
NASIL® A52F	1.6	17.5	27.5	52-53	600

Products with specific values of weight ratio, concentration and content in heavy metal or anion impurities, can be supplied according to customer requirements.

■ FIELDS OF APPLICATION

- Manufacture of soaps and detergents due to their properties as surfactants, corrosion inhibitors and water softeners.
- For bleaching pulp and de-inking recycled paper.
- As adhesives for corrugated paper board and insulation boards.
- In ceramics, sodium silicates are used as deflocculants of aqueous clay suspensions.
- Water treatment given their ability to inhibit corrosion and to precipitate metals in solution.
- As raw material for the production of zeolites, precipitated silica, precipitated silicates, silica gels and sols.
- In the construction industry, sodium silicate in solution is used as a setting agent for sprayed concrete and for soil consolidation.

■ SAFETY CLASSIFICATION FOR STORAGE AND TRANSPORT

The classification of soluble silicates in accordance with European standards for dangerous substances depends on their *n molar ratio* and solids concentration. According to Directive 67/548, as a general rule the following labelling can be established:

Corrosive when $n < 1.6$

Irritant when $n > 1.6$

Exception: solutions with $n > 3.2$ and concentrations of less than 40% are not classified as dangerous.

Sodium silicates in lumps are not classified as dangerous.



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