

Alkaline Sodium Silicate Liquid is produced by dissolving alkaline sodium silicate Lumps with water at 120°C Temperature and 2 kg/cm<sup>2</sup> pressure or by hydrothermal process which is produced by reacting caustic lye and fine crystalline silica in autoclaves under intense pressure.

ALKALINE SODIUM SILICATE GALSS LIQUID SPECIFICATION					
RATIO (Na <sub>2</sub> O : SiO <sub>2</sub> ) = 1 : 2.2 (+/- 2%)					
Be°	48° - 52°	52° - 55°	55° - 58°	58° - 60°	60° - 62°
Na <sub>2</sub> O (%)	13 - 14	14 - 16	16 - 18	18 - 20	20 - 22
SiO <sub>2</sub> (%)	29 - 30.5	30.5 - 34	34.5 - 38	39 - 42	43.5 - 46.5
TDS (%)	41 - 44.5	44.5 - 50	50.5 - 56	57 - 62	62 - 69
Weight Ratio (Na <sub>2</sub> O: siO <sub>2</sub> )	2.230	2.178	2.156	2.166	2.175
Sp.Gr.	1.495 - 1.559	1.559 - 1.161	1.611 - 1.666	1.666 - 1.705	1.755 - 1.757

### SODIUM SILICATE GALSS LIQUID SPECIFICATION:-

SODIUM SILICATE GALSS LIQUID SPECIFICATION	
Description	Specification Alkaline Glass
Physical State	Thick liquid
Appearance	Clear Liquid
color	Colorless, Transparent
Total Solid (%)	30 to 55
Weight Ratio (Na <sub>2</sub> O: siO <sub>2</sub> )	1:2.0 to 1:2.5
P.H	12-13
Specific Gravity (Density)	1.30 to 1.50
Stability and reactivity	Stable at Normal pressure and temperature
Melting Point	Not applicable.
Boiling Point (C°)	101.5 - 102
Water soluble (%)	100
Freezing point (C°)	-1°
Evaporation Temperature (C°)	Not applicable
Vapor pressure	Not applicable
Vapor density	Not applicable
Molecular formula	(Na <sub>2</sub> O) <sub>x</sub> · (SiO <sub>2</sub> ) <sub>y</sub> · H <sub>2</sub> O

**REACTION:** 2NaOH + SiO<sub>2</sub> -----Temp. + Pressure-----> (Na<sub>2</sub>O)<sub>x</sub> · SiO<sub>2</sub> + xH<sub>2</sub>O