

Sodium Hydroxide (NaOH)

Caustic soda lye is a solution of sodium hydroxide (NaOH) in water. It is a strong base with a wide range of applications in different industries. Caustic soda lye is a transparent, viscous and odorless solution which crystallizes at lower temperatures. It is a stable product that does not degenerate when exposed to light, heat or other factors.

Concentration

50 % w/w

Molecular weight

40.00

Molecular formula

NaOH

Characteristics

Boiling temperature,	1013 mbar
Density	1.5237 g/cm ³
Dynamic viscosity, 20°C	68.8 mPa.s
Explosion limits in air, 1013 mbar	non-explosive % v/v
Flash point in air, 1013 mbar	non-inflammable °C
Freezing temperature	11.6 °C
Melting temperature	~321 °C
Solubility in water, 0°C	420 g/l
Solubility in water, 20°C	1090 g/l
Solubility in water, 100°C	3420 g/l
Specific heat capacity (Cp)	3.23 J/g.K

Storage

Equipment made of carbon steel suffices well for 50% NaOH up to temperatures of max. 50 degrees Celsius. For 32% NAOH this maximum lies at approx. 60 degrees Celsius. When using carbon steel a very slight contamination with iron (Fe) must be expected. Should this prove unacceptable, stainless steel must be used, e.g. 304L, 316L.

Packaging and transport

Caustic soda lye is delivered in bulk by Road tank cars, rail tank cars, ISO-containers, barge or sea vessel. The available modality can differ per manufacturing site. The actual Full Truck Load (FTL) is geospecific and can therefore differ due to local regulations and legislation.

Safety and handling

Caustic soda lye is a strong base. It reacts violently with strong acids and water under production of heat. Caustic soda lye reacts with base metals such as aluminum forming flammable and potentially explosive hydrogen gas. For additional safety data and/or PPE usage, we refer to our material safety data sheets (MSDS).

