

Sodium Hydroxide (NaOH)

Caustic Soda flake is a white substance with crystalline appearance. It has hygroscopic properties. It is perfectly soluble in water, forming corrosive soda lye, which is accompanied by the release of significant amounts of heat.

Concentration
99%

Molecular weight
40.00

Molecular Formula
NaOH

Characteristics

Bulk density	1.1-1.2 kg/l
Density	1.5237 g/cm ³
Heat of solution, 20°C	42.3 kJ/mol
Melting temperature	~321 °C
Solubility in ethanol, 20°C	139 g/l
Solubility in methanol, 20°C	238 g/l
Solubility in water, 0°C	420 g/l
Solubility in water, 20°C	1090 g/l
Solubility in water, 100°C	3420 g/l

Storage

Caustic Soda Prills are extremely hygroscopic and may liquefy to caustic soda solution if handled unprotected even for a short period of time. It will also absorb carbon dioxide (CO₂) from air to give partially sodium carbonate (soda ash). Therefore, vessels, tanks, drums and bags containing Caustic Soda Prills have to be kept well tight and stored in a dry place to strictly prevent uptake of moisture and carbon dioxide from air which are the cause for clumping. When the 25 kg PE bags are stored on a pallet, no more pallets should be put on top of it to avoid compacting and clumping of the Caustic Soda Prills. In addition, stapled pallets will get instable during transport and storage, and bags might burst under the additional weight. Storage tanks should be sealed from air by a pressure relief/equalizing line provided with a drying cartridge (renewable silica gel absorber) or by flushing with dry air or dry nitrogen in case of high quality requirements. The dew point of blanket gas should be less than -40°C. With respect to all these recommendations Caustic Soda Prills will remain in spec for at least 2 years.

Packaging and transport

Caustic Soda Prills are dispatched in PE bags a 25 kg, PE drums a 227 kg, flexible big bags a 1000 kg, bulk by road tanker. Other containers (e.g. ISO containers) may be filled on request. Cargo tanks must be clean and thoroughly dry to avoid any possibility of contamination and clumping.

Safety and handling

Caustic soda Microprills absorb moisture and carbon dioxide readily from air and may turn partially to sodium carbonate (soda) or liquefy to concentrated caustic soda solution. The product is very soluble in water and dissolves very rapidly to caustic soda solution liberating a lot of heat; in methanol and ethanol it is well soluble. For additional safety data and/or PPE usage, we refer to our material safety data sheets (MSDS).

All information concerning this product and/or suggestions for handling and use contained herein are offered in good faith and are believed to be reliable. Nouryon, however, makes no warranty as to accuracy and/or sufficiency of such information and/or suggestions, as to the product's merchantability or fitness for any particular purpose, or that any suggested use will not infringe any patent. Nouryon does not accept any liability whatsoever arising out of the use of or reliance on this information, or out of the use or the performance of the product. Nothing contained herein shall be construed as granting or extending any license under any patent. Customer must determine for himself, by preliminary tests or otherwise, the suitability of this product for his purposes. The information contained herein supersedes all previously issued information on the subject matter covered. The customer may forward, distribute, and/or photocopy this document only if unaltered and complete, including all of its headers and footers, and should refrain from any unauthorized use. Don't copy this document to a website.

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