



Technical Data Sheet

Caustic Soda

Product Description

Caustic Soda, caustic, and lye are all common names of Sodium Hydroxide (NaOH). Caustic is used in water-based muds to increase hydroxyl ions to control pH and provide alkalinity.

Applications: Increasing pH; precipitation of magnesium; suppresses calcium in high hardness water; and Neutralizing acid gases such as carbon dioxide and hydrogen sulfide.

Treatments: Treatment for Caustic Soda depends on water chemistry and type of drilling fluid.

Typical concentrations range from 0.25 to 4 lb/bbl

When treating muds with Lignosulfonate or Lignite, Typical usage is one sack of caustic soda for every 4 - 6 sacks of lignosulfonate or lignite products.

Caution: Caustic Soda is a strong base, which is extremely soluble in water and will form high pH solutions. Use proper PPE while handling and mixing.

Product Formulas

Caustic Soda to reduce hardness:

Caustic Soda (lb/bbl) = $\text{mg/L} \times 0.00116 \times \text{Fw}$

Where: Fw = Water Fraction from retort analysis (% water/100)

KEY BENEFITS

- Hydroxyl source
- Corrosion Control
- Neutralizing acid Gases (Carbon Dioxide and Hydrogen Sulfide)
- Precipitation of Magnesium

Key Properties

pH	13.0
Color	White
Physical Form	Beads or Granules
Sg	2.13
Solubility @ 86°	119g/100 ml water
Packaging	50 lb Sacks