

### **Description**

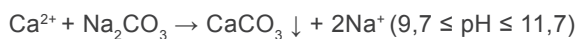
SODA ASH is a high-purity sodium carbonate ( $\text{Na}_2\text{CO}_3$ ).

### **Typical Properties**

Appearance : White powder  
pH (5% sol.) : 11.5  
Specific Gravity : 2.5  
Sol. in water : Completely

### **Features and Benefits**

SODA ASH is a cost effective product to precipitate soluble calcium ions as insoluble carbonates in water-base drilling fluids. The reaction is



SODA ASH maximizes the performance of bentonite and polymeric additives such as KAR-PHPA RD and KAR-PHPA L.

### **Application**

SODA ASH is used to treat out hardness due to calcium in make-up water.

SODA ASH removes calcium contamination from water based mud while drilling anhydrite and gypsum formations.

SODA ASH can also be added to increase viscosity of spud muds.

### **Limitations**

Over treatment with SODA ASH causes carbonate contamination and extremely high gel strengths.

SODA ASH is not suitable for high pH systems. It should not be used to treat out calcium in cement contaminated mud.

### **Treatment**

Normal treatment levels of SODA ASH ranges from 0.25 to 2 lb/bbl (0.71 to 5.71 kg/m<sup>3</sup>) depending on fluid type and chemistry. Theoretically, SODA ASH concentration is calculated from

$$\text{Soda Ash (lb/bbl)} = 0.00931 \times F_w \times \text{Ca}^{2+} \text{ (mg/l)}$$

Where  $F_w$  is water fraction in the fluid.

SODA ASH should be added slowly through a hopper or chemical barrel. When using a barrel, mix SODA ASH into a full barrel of fresh water and provide adequate agitation. Add SODA ASH until pH of 8.5 - 9.5 is obtained. Suggested ratio is 1/3 to 1/2 lb/100 gallons of water. SODA ASH should always be added prior to addition of bentonite or polymer to the fluid system.

### **Packaging**

SODA ASH is supplied in 25 kg (55 lb) or 50 kg (110 lb) multi-wall paper sacks.