

SODIUM METASILICATE ANHYDROUS (SMS)

CEMENT EXTENDER

Sodium Metasilicate Anhydrous (SMS) are a powder form of anhydrous sodium metasilicate. SMS are normally dry blended and used as an extender in oilwell cements. Light weight slurries can be formulated by blending SMS with the lime present in cement or by the addition of calcium chloride to produce a calcium silicate gel. This gel structure creates enough viscosity to allow for additional mix water without the problem of excess free water separation.

SMS may accelerate the set time of some cement blends. SMS are normally added in a concentration of 0.1% to 3% by weight of cement. Resulting slurry densities range from 1350-1750 kg/m³.

PHYSICAL PROPERTIES:

Appearance: White granules
Bulk Density: 1089 kg/m³
Particle Size: 841-212 microns (#20-#65 mesh)

CHEMICAL PROPERTIES:

Solubility: 180 kg/m³ @ 20°C
pH: 12.6 (1% solution)
Sodium Oxide: 50.5%
Silicon Dioxide: 46.2%
Carbon Dioxide: 1.66% max
Insolubles: 0.02% max
Iron: 15 ppm max

MIXING & HANDLING

SMS can be added directly through the admix bottle or predissolved in the cement mix water tank prior to use. If prehydrating in water, calcium chloride must added first to ensure gel formation. SMS exhibits a natural tendency to absorb humidity from the air. When stored in humid air for prolonged periods, these products may become sticky and cake into solid masses. Store product in a dry place and ensure packaging is tightly sealed.

WHMIS: Controlled (see SDS)

TDG: Not regulated

Packaging: 25kg bag

