



CA-AL5 HIGH ALUMINA CEMENT

DESCRIPTION

CA-AL5 is a processed calcium aluminate cementitious material which sets rapidly at extremely low temperatures, and can also be applied at extremely high temperatures. CA-AL5 can be applied at wellbore temperatures below freezing, 32° F, or used for cementing fireflood wells where temperatures may exceed 2500° F (1370° C).

CA-AL5 is not a Portland cement, and is incompatible with Portland cement. For extreme temperature applications, CA-AL5 can be stabilized by mixing it with aluminum silicates.

PHYSICAL PROPERTIES

Material	Form	Sp. Gravity	Abs. Vol.	Packigng
CA-AL5	Grey Powder	3.05	0.039 gal/lb	94 lb sacks

APPLICATION

CA-AL5 is a fast setting cement even at extremely low temperatures thus, it is ideal for cementing Permafrost sections in Arctic Regions. Once set, the cement develops adequate compressive strength to support the casing and protect the formation, and is very stable to freeze-thaw cycling inherent with regulated production.

CA-AL5 may also be mixed with aluminum silicates (fire brick) for applications where steam flooding or fire flooding is to be conducted. The set cement is stable at temperature above 2500° F (1370° C).

When mixed with water CA-AL5 reacts very quickly. At BHCT's (Bottom Hole Circulating Temperatures) ranging from 32° F (0° C) to 125° F (52° C) MAXIMUM, thickening times for a "neat" cement slurry will vary from 4 hours to as short as 20 minutes, respectively. At temperatures above 100° F (38° C) the use of Messina Retarders CA-R2, CA-R5, or CA-R7 are advised to produce adequate pumping times. Typical CA-AL5 slurry densities range from 15.0 ppg to 16 ppg.

Portland cement is a tremendous accelerator for CA-AL5 cement, and should not be mixed with it. Care must be taken to ensure all Mixing and pumping equipment is clean of Portland cement prior to using CA-AL5 systems.