Diacel® HE-400 Powder Cement Fluid-Loss Additive

Diacel® HE-400 Powder Cement Fluid-Loss Additive is a high molecular weight polymer that is stable at high temperatures. In oilfield cement slurry applications, Diacel® HE-400 Powder Cement Fluid-Loss Additive imparts both anti-settling and fluid-loss control properties. It is particularly effective as a high-temperature anti-settling agent. Diacel® HE-400 Powder Cement Fluid-Loss Additive will provide fluid-loss control at any density, but due to its effect on viscosity it is best suited for low-density applications.

To achieve optimum fluid-loss control in normal or high-density slurries, it is best to use 4:1 or 5:1 ratio of Diacel® FL Additive to Diacel® HE-400 Powder Cement Fluid-Loss Additive. The fluid-loss control performance of Diacel® HE-400 Powder Cement Fluid-Loss Additive is improved when used in conjunction with dispersants and most retarders. The viscosity contribution of Diacel® HE-400 Powder Cement Fluid-Loss Additive may be reduced by the addition of salts or sodium silicate.

In spacer fluids, Diacel® HE-400 Powder Cement Fluid-Loss Additive functions as a suspending agent and fluid-loss reducer. The concentration of use for Diacel® HE-400 Powder Cement Fluid-Loss Additive can be either increased or decreased to obtain the flow regime of interest. If fluid loss is an important property of the spacer, it is recommended that the bentonite concentration be varied to obtain the desired flow regime.

Uses

- Anti-settling agent
- Low-density cement fluid-loss control
- Spacer viscosifier and fluid-loss control

Application Areas

- All API classes of cement
- Freshwater, saltwater or seawater slurries

Typical Range of Use

Temperature	70°F - 450°F (21°C - 232°C) BHCT
Concentration	0.1% - 0.5% BWOC (anti-settling agent) 0.2% - 1.0% BWOC (fluid-loss agent) 1 - 5 lb/bbl (spacer viscosifier)
Density	12 - 20 lb/US gal (1.44 - 2.4 g/cm^3) (cement) 10 - 20 lb/US gal (1.2 - 2.4 g/cm^3) (spacers)

Physical Properties

- White powder
- Specific gravity = 1.44 g/cm^3
- Complete water solubility