

# Diacel<sup>®</sup> HE-400 Powder Cement Fluid-Loss Additive



Diacel<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> FL Additive to Diacel<sup>®</sup> HE-400 Powder Cement Fluid-Loss Additive. The fluid-loss control performance of Diacel<sup>®</sup> HE-400 Powder Cement Fluid-Loss Additive is improved when used in conjunction with dispersants and most retarders. The viscosity contribution of Diacel<sup>®</sup> HE-400 Powder Cement Fluid-Loss Additive may be reduced by the addition of salts or sodium silicate.

In spacer fluids, Diacel<sup>®</sup> HE-400 Powder Cement Fluid-Loss Additive functions as a suspending agent and fluid-loss reducer. The concentration of use for Diacel<sup>®</sup> 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

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

## Physical Properties

- White powder
- Specific gravity = 1.44 g/cm<sup>3</sup>
- Complete water solubility

Before using this product, the user is advised and cautioned to make its own determination and assessment of the safety and suitability of the product for the specific use in question and is further advised against relying on the information contained herein as it may relate to any specific use or application. It is the ultimate responsibility of the user to ensure that the product is suited and the information is applicable to the user's specific application. Drilling Specialties Company does not make, and expressly disclaims, all warranties, including warranties of merchantability or fitness for a particular purpose, regardless of whether oral or written, express or implied, or allegedly arising from any usage of any trade or from any course of dealing in connection with the use of the information contained herein or the product itself. The user expressly assumes all risk and liability, whether based in contract, tort or otherwise, in connection with the use of the information contained herein or the product itself. Further, information contained herein is given without reference to any intellectual property issues, as well as federal, state or local laws which may be encountered in the use thereof. Such questions should be investigated by the user.