

# StarPak<sup>®</sup>

## DP

StarPak<sup>®</sup> DP is a premium, low viscosity polymer specifically designed for filtration control and enhanced low shear rheology in a variety of water-based drilling and completion fluids for temperatures up to 250° F. StarPak DP is an excellent candidate for use where traditional CMC and PAC's are used.

### Features

- Meets API 13A Starch specifications
- Compatible in a wide range of water-based fluids
- Temperature Stable to 250° F
- Cost effective alternative for PAC/CMC
- Enzymatically stable and fermentation resistant without addition of biocide.
- Inhibition/Encapsulation of clay surfaces
- Enhanced low shear rheology

### Appearance

StarPak DP is supplied as an off-white powder. Aqueous solutions are translucent and demonstrate excellent stability.

### Compatibility

StarPak DP is effective in a wide range of water-based drilling and completion fluids including low solids, non-dispersed, high solids lignosulfonate dispersed, potassium chloride, seawater and any mono- and divalent brine based systems.

### Temperature Stability

StarPak DP is generally stable to 250°F.

### Filtration Control

StarPak DP provides excellent filtration efficiency across a wide variety of systems. Filter cakes are thin and exhibit excellent lubricity.

StarPak DP provides filter cakes are thin and exhibit excellent lubricity and is an excellent choice to replace CMC and PAC materials.

StarPak DP exceeds API performance requirements for LV CMC.

### Rheology/Viscosity

At low shear rates StarPak DP exhibits a synergistic relationship with low levels of xanthan gum, bentonite, buffers, and carbonate based solids. The added viscosity provided by StarPak Extreme allows formulators to decrease the concentration of traditional biopolymers used for low-end rheology.

### Fermentation and Enzyme Stability

Biocide addition is not generally necessary when using StarPak DP. The unique modification of StarPak DP provides natural fermentation and enzyme resistance to solutions without the need of preservatives. This feature provides an advantage where biocides cannot be used.

### Inhibition/Encapsulation

StarPak DP is an anionic polymer that readily adsorbs onto clay surfaces. This adsorption efficiently coats clay particles preventing sloughing into the fluid and also encapsulates drilled solids to effect better removal on solids control equipment.

### Low Salt Content

StarPak DP is 80 – 95% pure functional polymer, containing half the salt of common oilfield grade CMC.



### Cost Effective

Intermediate in price between non-derivatized starch and cellulosic polymers, the use of StarPak DP provides significant economy in fluid loss control in all types of water-based systems. In addition to efficient filtration control, a reduction of expensive xanthan polymer is possible due to the enhanced low-shear rheology obtained through the use of StarPak DP.

### Storage, Handling and Safety

Due to the hygroscopic nature of StarPak DP, it is highly recommended that the material be stored in its original package in a dry facility. Shelf life can be affected by storage conditions such as temperature, humidity and overall surroundings of the storage area. Long-term storage may lead to hardening of the material within the bag. A Safety Data Sheet is available from Chemstar and should be consulted prior to handling or using StarPak DP.

### Availability

StarPak DP is available in 50 lb multi-wall poly-lined paper bags or 2,000 lb super sacks for truckload and LTL shipments. For additional information, samples or technical assistance in using StarPak DP or any other Chemstar product please contact 1-800-328-5037 or [info@chemstar.com](mailto:info@chemstar.com)

### Typical Analysis

StarPak DP	
Nature	Highly modified, polysaccharide ether
Form	Granular Powder
Moisture (%)	10 Max
Bulk Density (lbs/ft <sup>3</sup> )	30 – 45
Particle Size (% thru)	100% (-) 850 micron 65% min (-) 180 micron
Appearance	Off White
Ionic Character	Anionic

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