

# Dristemp<sup>®</sup> Polymer



A DIVISION OF CHEVRON PHILLIPS  
CHEMICAL COMPANY LP

Dristemp<sup>®</sup> Polymer is a white, free-flowing synthetic polymer designed for high temperature drilling environments. It is compatible with all commonly used materials in water-based drilling fluids and is used for high temperature fluid loss control and inhibition of cutting and shales. In typical fresh and saltwater muds, Dristemp<sup>®</sup> Polymer performed well up to 375 °F in lab testing and has shown excellent performance in formate fluids above 400 °F. In field muds, thermal stability might be expected to be higher. For very high temperature fresh or salt water applications Dristemp<sup>®</sup> Polymer partners well with Driscal<sup>®</sup> D Polymer, which should be phased into the system starting at around 350 °F.

## Advantages

- Works well at any salinity
- Reduces differential sticking tendencies
- Is calcium tolerant to 5,000 ppm
- Temperature stable to 375 °F (190 °C)
- Can improve thermal stability of whole mud system
- Non-fermenting
- Helps maintain the integrity of cuttings
- Inhibits hydrateable and sloughing shale
- Increases the effectiveness of solids-control equipment
- Hydrates quickly without forming “fish-eyes”
- Improves drilling fluid suspension properties compared to other competitive high temperature materials where barite settling can be an issue
- Works well in formate muds

Application	Material Needed
HTHP Fluid-loss control	1 to 6 ppb (3 to 17.0 kg/m <sup>3</sup> )
Shale Inhibition/encapsulation	0.5 to 3.0 ppb (1.5 to 14.0 kg/m <sup>3</sup> )
Improved filter cake	0.5 to 5.0 ppb (1.5 to 14.0 kg/m <sup>3</sup> )
Improved and Stabilized Rheology	0.5 to 5.0 ppb (1.5 to 14.0 kg/m <sup>3</sup> )
Reduce stuck pipe frequency	0.5 to 0.75 ppb (1.5 to 2.0 kg/m <sup>3</sup> )
Improved hole cleaning	0.5 to 5.0 ppb (1.5 to 14.0 kg/m <sup>3</sup> )
Completion & workover fluids	0.5 to 6.0 ppb (1.5 to 17.0 kg/m <sup>3</sup> )
Work over / completion fluids	0.5 to 6.0 ppb (1.5 to 17.0 kg/m <sup>3</sup> )

## Recommendations

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.

## Cost

Dristemp<sup>®</sup> Polymer is a high-performance, hostile environment polymer which is cost-effective against other synthetic additives in these challenging fluid environments. Total well cost for interval drilled is usually lower.

## Mud Types:

All common water-based drilling fluids including fluids formulated with formate brines

## Mixing Requirements

Mix slowly through conventional jet hopper.

## Handling

For specific instruction on handling refer to the MSDS.

## Packaging

Dristemp<sup>®</sup> Polymer: 50-pound, multiwall paper sacks, 40 sacks per pallet.

# Dristemp<sup>®</sup> Polymer



Dristemp<sup>®</sup> Polymer is an excellent replacement for starch in hard, salty systems particularly as increasing down hole temperatures degrade such products. Dristemp<sup>®</sup> Polymer will also contribute to shale inhibition and cuttings integrity.

## Information on Drilling Specialties Companies other high temperature polymers

Dristemp<sup>®</sup> Polymer provides exceptional HTHP fluid loss control and rheological properties in a wide variety of fluids. However, Driscal<sup>®</sup> D Polymer has considerably higher thermal stability than Dristemp<sup>®</sup> Polymer. In lab tests, Driscal<sup>®</sup> D Polymer has delivered good fluid loss control as well as barite suspension after aging at temperatures up to 475 °F. The highest bottom hole temperature in which Driscal<sup>®</sup> D Polymer has been used is reported to be in excess of 500 °F in California geothermal wells and in a steam flood project in Alberta, Canada.

Unlike Dristemp<sup>®</sup> Polymer, Driscal<sup>®</sup> D Polymer does not perform well in formate muds. Further, in certain water base muds, it has been observed in lab testing that Driscal<sup>®</sup> D Polymer does not provide good HTHP fluid loss control until the muds are aged at high temperature (approximately 330 °F). Therefore for very high temperature field applications we recommend using Dristemp<sup>®</sup> Polymer to about 375 °F while beginning to replace it with Driscal<sup>®</sup> D Polymer at 350 °F. This allows for a seamless transition to the higher temperatures.

In silicate muds, Drilling Specialties hostile environment product, HE 300 Polymer, is recommended for HTHP fluid loss control.

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