

## INFORMATION

# POLYSPERSE

### SYNTHETIC DEFLOCCULANT

#### DESCRIPTION

POLYSPERSE is a high-performance synthetic polymeric deflocculant/thinner for water base drilling fluids, which is available in both powder and liquid forms. It is anionic, of low molecular weight, and has a very narrow molecular weight distribution. The dry form is a white powder, and the liquid form is amber in color. This product is environmentally safe to use and handle.

#### APPLICATION

POLYSPERSE is a remarkably effective thinner/deflocculant and fluid loss control agent in most water base mud systems. Its performance generally surpasses chrome lignosulfonates, especially at elevated temperatures. Muds treated with POLYSPERSE retain excellent fluidity and exhibit low gel strengths and fluid loss even at 450° F (232° C). POLYSPERSE can be used in fresh water and sea water muds, exhibiting fairly good tolerance to calcium and magnesium. Therefore, it is applicable in lime systems. POLYSPERSE has been used successfully in geothermal wells with bottom-hole temperatures above 650° F (348° C).

In environmentally sensitive areas, POLYSPERSE simplifies waste water treatment and reduces compliance costs because it is essentially non-polluting in the low concentrations in which it is normally used. The product contains no chromium or other metal salts, and no sulfite or lignin by-products as are found in conventional mud thinners.

POLYSPERSE drilling fluids retain a light color and have water-clear filtrates. This simplifies mud filtrate analysis, and means that sumps and reserve pits stay clear and clean, with no brown lignin color.

#### ADVANTAGES

- Effective at low concentrations.
- Thermally stable at 500° F and above.
- Low environmental toxicity.
- Dissolves readily with low shear.
- Effectively reduces fluid loss.

### **RECOMMENDED TREATMENT**

POLYSPERSE is effective in concentrations of 0.1 to 1.0 ppb (0.28 - 2.85 gr/L, or 0.6 to 5.7 kg per cu m), depending upon the degree of dispersion, high-temperature stability, and fluid loss control required. In general, heavy weight muds will require a higher product concentration than unweighted muds.

POLYSPERSE is up to 6 times as effective as chrome lignosulfonate (i.e., for comparable performance, 1 lb of POLYSPERSE replaces up to 6 lb of lignosulfonate).

### **LIMITATIONS**

For best performance, control calcium below 400 ppm. High calcium can precipitate the polymer. Treat hardness from sea water.

### **PACKAGING**

POLYSPERSE powder is available in 50 lbs or 25-kg multi-ply export bags, while the liquid is provided in 5-gal plastic pails, and in 55-gal drums.

POLYSPERSE is a Messina trademark