PHPA (P24) Polymer

The P24 polymer is a partially hydrolyzed acrylamide copolymer (PHPA) with a high molecular weight and anionic charge. In the technology of drilling muds, the P24 polymer is used as a flocculant and as a means of reducing the hydration of clay rocks. At low concentrations of 10-100 g/m3, the product causes flocculation of drill cuttings and prevents the dispersion of the solid phase in the mud. At concentrations of 0.5-2.0 kg/m3, the polymer forms encapsulating shells and reduces hydration and swelling of drilled clay rocks. The addition of P24 to the mud simultaneously increases viscosity, lowers the coefficient of friction and improves coring performance. The product should be added slowly through a hydraulic mixer and continue mixing for about 15 minutes, i.e. until the polymer is completely dissolved in the mud. The measurement of the P24 polymer content in the drilling fluid follows the standard P24 determination procedure. e.g. Poly-Plus dry.

Properties

Appearance	white, fine-grained granules
Bulk density	650-750 g/l
Solubility in water	total
Solution viscosity 0.5% at temp. 20°C (Brookfield)	5 500 mPa s
pH of 0.5% solution	7.5

Tests of the polymer-potassium mud with the content of 0.1% P24 polymer were carried out in the Oil and Gas Institute’s Laboratory in Krakow. They were aimed at determining the effect of the polymer on active clay rocks and changing the permeability of reservoir rocks. As a result of the tests, it was found that the tested mud fully meets the requirements for muds for drilling clay rocks a at the same time, it only slightly reduces the primary permeability of reservoir rocks.

Packaging

P24 polymer is packed in 25 kg multilayer paper bags. There are 40 bags of the product (1000 kg) on one pallet.