

### PHPA SHALE INHIBITOR – ENCAPSULATING AGENT

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#### Description

POLYCAP® is a shale inhibitor/ solids encapsulating polymer for water-based drilling fluids. It is a water soluble product of polyacrylamide and sodium acrylate copolymerization. POLYCAP® is an anionic polymer meaning it is attracted to the clays cationic surfaces and encapsulates them with the polymeric film. It is used in freshwater, seawater, NCI and KCl mud systems.

POLYCAP® molecular weight ranges up to 20 million. Due to the carbon-carbon linkage, the polymer has exceptional thermal stability and is resistant to bacteria. The polymer attaches to cutting and clays on the wellbore and blocks the hydration and dispersion of the clay particles. Because of its high molecular weight it combines with several sites along the wellbore and restricts water from entering the sensitive formation.

#### Applications/Functions

- Coats the wellbore wall with the polymeric film and provides superior wellbore stability
- Helps preserve cuttings integrity, allows easier cuttings removal at the surface
- Increases water phase viscosity thus limiting the filtrate invasion into the fissures and fractures within a shale
- Forms a thin and firm filter cake
- Improves mud lubricity

#### Advantages

- High thermal stability (up to 150C)
- Effective in a salt environment

#### Recommended treatment

1-2.5 ppb (2.8-7 kg/m<sup>3</sup>). POLYCAP® treated mud can be slightly flocculated and the polymer un-sheared for the first circulation or two. It is recommended to keep the MBT value lower than 20 ppb (56 kg/m<sup>3</sup>). It is recommended to keep pH values lower than 10.5 and total hardness – lower than 500 mg/l. Please refer to the product brochure for more information.

#### Typical properties

White free flowing powder

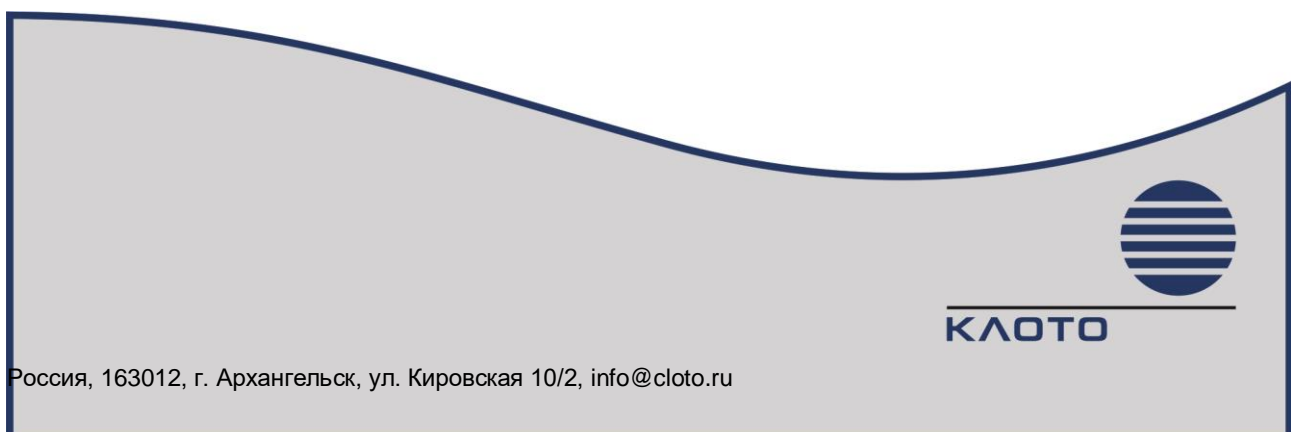
#### Handling

Please refer to the MSDS for specific instructions

#### Packaging

POLYCAP® encapsulating agent is packaged in 50lbs (22,6 kg) bags

\*Disclaimer: Prior to using this product, the user is hereby informed and cautioned to make their own determination and assessment of the safety and applicability of the product for the specific job. It is the final responsibility of the user to ensure that the product is suitable and the information is applicable to the user's specific application.



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