



CLEAR SOLUTIONS
Performance Drilling Products
The Earth Can Trust

Pure-Bore®

Pure-Bore® effectively increases shear thinning viscosity in water-based drilling fluids, while also providing cuttings encapsulation and fluid loss control.

Product description

Pure-Bore® is a multifunctional proprietary polysaccharide for use in water-based drilling fluids. It uniquely combines a highly shear thinning viscosity profile with clay encapsulation and fluid loss control. These properties allow it to form the basis of a high-performance water-based system. Furthermore, it's distinct cake-building properties effectively stabilise loose and unconsolidated formations.

Applications

Pure-Bore® can be used in a wide range of water-based drilling fluids and is compatible with mono- and divalent brines. Its non-damaging, non-invasive properties make it suitable for use in reservoir drill-in fluids (RDF's).

Pure-Bore® is also used in water-well drilling, mining and horizontal directional drilling (HDD).

Functions

Rheology

Drilling fluids built with Pure-Bore® are characterised by an elevated low shear rate viscosity combined with a low plastic viscosity, resulting in excellent hole cleaning and cuttings suspension at lower pump pressures and ECD's.

Clay and shale encapsulation

Pure-Bore® polymers are effective clay encapsulators, controlling the dispersion of clay cuttings and limiting the hydration and de-stabilisation of exposed shale formations. Unlike PHPA, Pure-Bore® is effectively recycled through fine shaker screens.

Fluid loss control

Pure-Bore® molecules will form a low permeability filter cake without the requirement of fine solids. This unique filter cake not only reduces fluid loss, but also effectively stabilises unconsolidated formations.

Advantages

- Exceptionally shear thinning with non-progressive gels
- Tight filter cake and solids free fluid loss control
- Provides excellent clay and shale encapsulation
- Stabilises unconsolidated formations
- Effectively recycles through fine shaker screens
- Temperature stable to 250°F/121°C
- Readily dispersible and easy to mix
- Non-damaging to reservoirs
- Easily destroyed by enzyme- or oxidizing breakers
- Tolerant to hardness (calcium) and high pH:
 - Compatible with divalent brines
 - Largely unaffected by cement contamination
 - Treating for hardness with soda ash is not required
- Environmentally friendly:
 - CEFAS registered as PLONOR
 - Germany: WGK class 1 (NWG up to 3% wt. in mixtures)
 - Inherently biodegradable

Recommended treatment

Slowly and uniformly mix Pure-Bore® into water or brine using a venturi or colloidal mixer and continue to agitate/circulate until the product is fully dispersed. The time required for the product to yield its ultimate viscosity depends on salinity, temperature, and shear.

Polymer muds: 1.4 - 3.5 lbs/bbl (4 - 10 kg/m³) ¹

Bentonite muds: 0.35 - 1.05 lbs/bbl (1 - 3 kg/m³) ²

¹ The required concentration may vary significantly depending on the application and the concentration of other products used in the formulation.

² The bentonite concentration in the mix should be reduced by approx. 50%. The bentonite should be hydrated first, before adding Pure-Bore® to the slurry.

Typical physical properties

Physical appearance: White to off-white free flowing powder
Specific gravity: 1.2
Bulk density: 0.8 - 0.9 g/cm³ (approx.)
pH (0.5% solution): 6.5 - 8.5

Toxicity and handling

Bioassay information is available upon request.

Handle as an industrial chemical, wearing protective equipment and observing the precautions described in the safety datasheet.

Packaging and storage

Store at room temperature in a dry, well-ventilated area. Keep in original container and store away from incompatibles.

Pure-Bore® is available in:

- *5 kg plastic bags (5 x 5kg bags per cardboard case)*
- *25 kg plastic bags (40 x 25kg bags per pallet)*
- *25 lb plastic bags (85 x 25lb bags per pallet)*
- *965 kg big bag*

No warranty expressed or implied, of merchantability fitness for a particular purpose or otherwise is made, except the product conforms to seller specifications. Buyer assumes all risk of use, storage, and handling. Seller shall not be liable for any incidental or consequential damages arising directly or indirectly in connection with the purchase, use, storage, or handling of the product.

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