

Technical Data Sheet

Cebo Hybrid-Gel

Construction

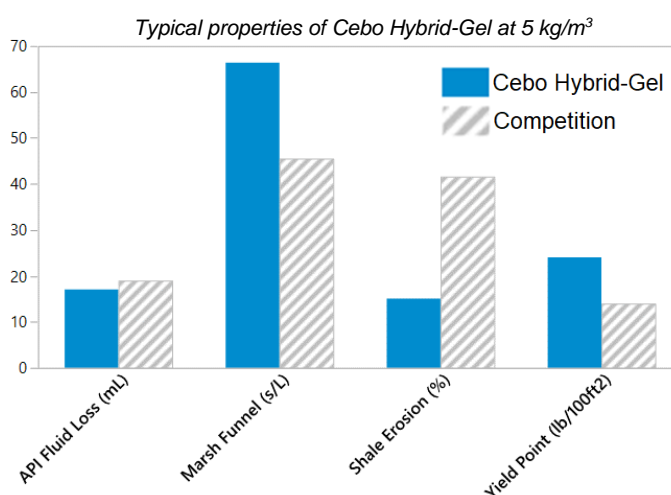
Cebo Hybrid-Gel is a single-sack drilling product, based on natural polymers. The product is completely biodegradable and nontoxic. Its fluid properties make it useful in a variety of drilling disciplines.

Fluid properties

Cebo Hybrid-Gel imparts both shear-thinning and thixotropic rheological properties to the drilling fluid. This means it pumps easily under high pressures yet maintains enough viscosity to suspend cuttings as they are transported through the annulus.

When drilling is halted, the fluid gels slightly to help prevent cuttings settling.

Cebo Hybrid-Gel additionally minimizes fluid losses to the formation, and inhibits swelling clays, both of which help to maintain hole integrity.

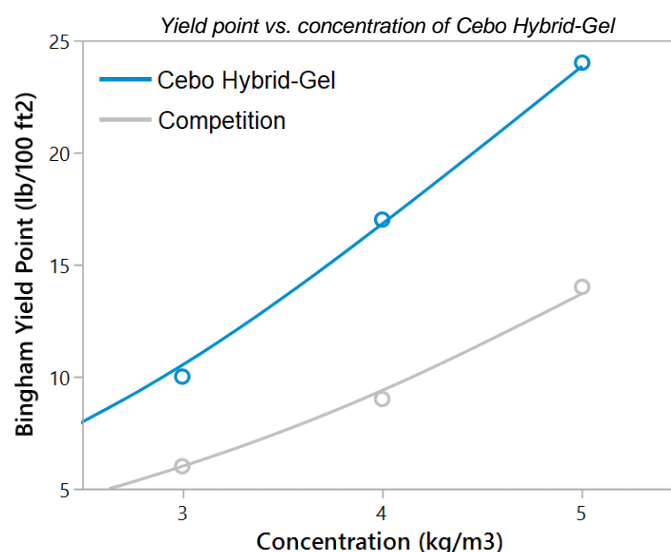


Advantages

Cebo Hybrid-Gel can be used in drilling situations where clay-free drilling fluids are required without the need to sacrifice many of the benefits of traditional bentonite-based systems.

Since all components are considered PLONOR and have been registered with Cefas, Cebo Hybrid-Gel can be used in drilling scenarios where the environmental impact must be clearly understood.

Because Cebo Hybrid-Gel is effective at very low concentrations it can prove to be more economical than alternative solutions and may reduce onsite footprint. In many cases the number of additional drilling additives required can be reduced, making fluid preparation easier and leaving more time for drilling.



Limitations

As with all biodegradable drilling fluids, Cebo Hybrid-Gel will ultimately begin to break down as it is degraded by microorganisms present in the soil and make-up water.

The exact rate of this degradation is difficult to predict but depends among other things on temperature, pH and salinity. If the drilling fluid is to be used for more than 48 hours, it is recommended that the fluid be stabilized by addition of household bleach (approx. 5% sodium hypochlorite). Start by adding 0,5 l of bleach per cubic meter of mix water prior to addition of Cebo Hybrid-Gel.

Additional bleach can be added as needed up to 1,25 l/m³.

Generally speaking, degradation will be quicker at higher temperatures and with lower quality makeup water as compared to lower temperatures and freshwater.

Degradation of 4 kg/m³ Cebo Hybrid-Gel in dirty make-up water with and without bleach, as measured by changes in viscosity.

