

# GEL

## Viscosifier

### Product Description

GEL is a premium-grade bentonite, sodium montmorillonite clay that will yield 91 to 100 barrels of 15-cP mud per ton (1.7 m<sup>3</sup>/100 kg).

It is used as a primary filter-cake-building, filtration-control and suspension agent in freshwater systems, and has application in all water-base mud systems. GEL viscosifier is a high-quality product which meets the ISO 13500 Clause 9, API Spec 13A, Section 9 specifications for Bentonite.

### Typical Physical Properties

Physical appearance	Light tan/gray-green powder
Specific gravity	2.3 - 2.6
Bulk density	48 - 52 lb/ft <sup>3</sup> (769 - 833 kg/m <sup>3</sup> )
Residue >75 micron (wet screen)	4% wt, max

### Application

GEL is used to increase viscosity and reduce fluid-loss in water-base drilling fluids. It is a cost-effective means of achieving viscosity, fluid-loss control and filter-cake quality in freshwater and seawater muds.

As with all GEL products, the yield decreases as water salinity increases. In muds containing more than 10,000 mg/L chlorides, the performance of GEL is significantly reduced unless pre hydrated in freshwater before adding to the mud system.

### Advantages

- Hydrates more than other types of clays and is best for generating viscosity, developing gels for suspension and controlling filtration
- Small particle size, unique flat shape and high surface area of hydrated GEL viscosifier provides superior filtration characteristics
- Promotes the deposition of thin, compressible filter cakes in the wellbore

### Limitations

- Performance reduced in salty (>5,000 mg/L Cl<sup>-</sup>) or hard (>240 mg/L Ca<sup>++</sup>) waters due to decreased hydration

### Recommended Treatment

Typical concentrations for GEL range from 5 to 35 lb/bbl (14.3 to 100 kg/m<sup>3</sup>).

### Toxicity and Handling

Bioassay information is available upon request.

Handle as an industrial chemical, wearing protective equipment and observing the precautions as described in the Material Safety Data Sheet (MSDS).

### Packaging and Storage

GEL powder is packaged in 100-lb (45.4-kg) multi-wall paper sacks, 40-kg sacks, 1 MT big bags and is available in bulk.

Store in a dry, well-ventilated area. Keep container closed. Store away from incompatibles. Follow safe warehousing practices regarding palletizing, banding, shrink-wrapping and/or stacking.

Important Note: These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and method of use of our product are beyond our control. We recommend that the prospective user determine the suitability of our material and suggestions before adopting them on a commercial scale.