

# GELITE

## High-yield clay

### APPLICATIONS

- Water-based and direct emulsion drilling fluids

### BENEFITS

- Enables higher carrying capacity at lower velocities
- Increases viscosity and reduces fluid loss
- Has a low cation exchange capacity when swelling
- Imparts thixotropy to aqueous solutions
- Provides superior filtration characteristics due to its special grit, and unique shape
- Achieves viscosity, filtration control, and filtercake quality in cost-effective manner

### FEATURES

- High yield point
- Better stability than bentonite viscosifier because of its much lower cation exchange capacity

GELITE\* high-yield clay is a premium-grade saponite, a clay mineral of the montmorillonite family, which has low grit and is specially ground for the drilling industry. This clay has a high yield point which enables a higher carrying capacity at lower annular velocities than bentonite clay. Typical concentrations range from 5 to 35 lbm/bbl [14.25 to 99.75 kg/m<sup>3</sup>].

Similar to the bentonite products, the yield decreases as water salinity increases. In muds containing more than 10,000 mg/L chlorides (Cl), the performance of GELITE clay is significantly reduced unless prehydrated in freshwater before being added to the mud system.

### Limitations

GELITE clay performance is reduced in salty or hard waters with greater than 10,000-mg/L Cl<sup>-</sup> or greater than 240-mg/L Ca<sup>2+</sup> due to decreased hydration.

### 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

GELITE clay is packaged in 50-lbm [22.7-kg] multiwall paper sacks. It is also 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 stacking.

### Typical Physical Properties

Color	White
Odor	Odorless
Physical state	Powder
Specific gravity	2.0–2.4
Moisture	8% maximum
Residue <sup>†</sup> , +200 mesh wet screen	3%

### Typical Rheological Properties, Fresh Water

Yield, bbl/tonUS [m <sup>3</sup> /tonUK]	110 [19.65]
Yield point, lbm/100 ft [kg/30 m]	32 [14.51]
Plastic viscosity, cP	4
Viscosity <sup>‡</sup> , cP	40
Water loss, cm <sup>3</sup>	3

<sup>†</sup> Normally composed of clay agglomerates or limestone.

<sup>‡</sup> Fann Viscometer dial reading at 600 rpm.

*The above properties are typical and not intended to be product specifications.*