

**Technical Data Sheet
API Grade Bentonite**

Revised 09/25/06

VOLCLAY[®] PREMIUM GEL

Description	Premium Gel is a 200 mesh, 90 bbl. yield sodium bentonite for freshwater drilling. Complies with American Petroleum Institute drilling fluid specification 13A for bentonite.
Functional Use	May be used for all types of freshwater drilling where higher solids are required.
Purity	Hydrous aluminum silicate comprised principally of the clay mineral montmorillonite. Contains small portions of feldspar, calcite, and quartz.
Chemical Formula	Diocahedral smectite, an expanding layer silicate: $(\text{Na,Ca})_{0.33}(\text{Al}_{1.67}\text{Mg}_{0.33})\text{Si}_4\text{O}_{10}(\text{OH})_2 \cdot n\text{H}_2\text{O}$
Advantages	Mixes quickly and easily Stabilizes the borehole Removes cuttings Cools and lubricates the bit Reduces fluid loss into the formation
Bulk Density	Typically 54 lbs./ft ³
Moisture	Maximum 12% as shipped.
pH	8.5 to 10.5 @ 5% solids.
Dry Particle Size	Minimum 65% passing 200 mesh (74 microns).
Wet Particle Size	Minimum 94% passing 200 mesh (74 microns). Minimum 92% passing 325 mesh (44 microns).
Packaging	Bulk or palletized in carload and truckload quantities. 100 lb. & 50 lb. multiwall, water-resistant bags or 2,000 lb. bulk bags.

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