



EMCSAFE DRILLING-GRADE BENTONITE — API 13A (Section 9)

Technical Data Sheet

About EMCSAFE

EMCSAFE is a Middle East based supplier and exporter of high-quality bentonite products. We provide drilling-grade bentonite that complies with international API 13A standards, serving the oil, gas, HDD and water-well drilling industries worldwide.

Product Description

High-purity natural sodium bentonite designed for use as a viscosifier and filtrate-loss control agent in water-based drilling fluids. Meets API Specification 13A, Section 9 when tested per API RP 13B-1.

Compliance & Test Methods

- Conforms to API Specification 13A, Section 9 (Drilling-Grade Bentonite).
- Tested according to API RP 13B-1.
- ISO 13500 equivalent methods may be applied.

Guaranteed Specifications (as supplied)

Parameter	Specification	Test Method
Viscometer dial reading @ 600 rpm	≥ 30	API RP 13B-1
Yield Point / Plastic Viscosity ratio	≤ 3.0	API RP 13B-1
API Filtrate (30 min, 100 psi)	≤ 15 mL	API RP 13B-1
> 75 µm residue (wet sieve, % by mass)	≤ 4.0 %	API 13A Sec. 9
Moisture (as packaged)	≤ 12.0 %	API 13A Sec. 9 / ASTM D2216

Typical Physical & Chemical Properties

Appearance: Free-flowing beige to light-brown powder

Mineralogy: Smectite (montmorillonite) rich clay

Particle size: ≥ 90–95% passing 200 mesh (75 µm)

pH (10% slurry): 8.5 – 10.5

Bulk density (tamped): 0.8 – 1.0 g/cm³

Loss on ignition (LOI, 1000 °C): ≤ 12 %

Typical Mud Performance in Fresh Water

Property	Typical Value
Viscometer 600 rpm	35 – 45 dial units
Viscometer 300 rpm	20 – 30 dial units
Plastic Viscosity (PV)	10 – 15 cP

Yield Point (YP)	15 – 25 lb/100 ft ²
Gel Strength, 10 sec / 10 min	5 – 10 / 8 – 15 lb/100 ft ²
API Filtrate (30 min)	≤ 15 mL
Marsh Funnel Viscosity	40 – 55 s/Qt

Recommended Use & Dosage

- Base viscosifier for freshwater drilling and filtrate-loss control.
- Typical concentration: 4 – 8% w/w (\approx 14 – 28 lb/bbl or 40 – 80 kg/m³).
- Hydrate in clean, low-salinity water; add slowly through a hopper with good shear.

Compatibility & Limitations

Performance decreases in saline, divalent-ion rich or high-pH brines. Polymer enhancement may be required for challenging conditions.

Handling & Storage

Store in a dry, covered area. Protect from moisture. Handle using dust control practices. Refer to the SDS for HSE guidance.

Packaging

- Multi-wall paper bags: 25 kg, 50 lb, 100 lb
- Bulk and big-bag options available
- Export packaging designed for international shipping

Notes & References

- Specification limits reflect API Specification 13A, Section 9.
- Testing performed in accordance with API RP 13B-1.
- Typical values are not guaranteed and may vary with clay source and water chemistry.

EMCSAFE Minerals

Exporting Premium Bentonite from the Middle East to the World

Website: www.emcsafe.com | Email: info@emcsafe.com