

# M-I Gel Supreme

M-I Gel\* Supreme viscosifier is a chemically untreated, premium-grade bentonite (a sodium montmorillonite clay). 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. M-I Gel Supreme viscosifier is a high-quality product that meets the ISO 13500 Clause 10 (also known as API Spec 13A, Section 10) specifications for nontreated bentonite.

## Typical Physical Properties

Physical appearance ..... Light tan/gray-green powder  
 Specific gravity ..... 2.3 – 2.6  
 Bulk density ..... 48 – 52 lb/ft3 (769 – 833 kg/m3)

### ISO 13500 Clause 10 Specifications:

Suspension properties (Suspension of 25 grams into 350 cm3 deionized water):

Dispersed plastic viscosity ..... 10 cP, min.  
 Yield-point/plastic-viscosity ratio ..... 1.5, max.  
 Dispersed API filtrate volume ..... 12.5 cm3, max.

## Applications

M-I Gel Supreme viscosifier is a cost-effective product for achieving viscosity, controlling fluid loss and maintaining filter-cake quality in freshwater and seawater muds. Typical concentrations for M-I Gel Supreme viscosifier range from 5 to 35 lb/bbl (14.3 to 100 kg/m3).

As with all bentonite products, the yield decreases as the salinity increases. In muds containing more than 10,000 mg/L chlorides, the performance of M-I Gel Supreme viscosifier is significantly reduced unless it is pre-hydrated in freshwater, before adding it to the mud system.

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## Advantages

- Hydrates more than other types of clays and is best for generating viscosity, developing gels for suspension and controlling filtration
- A premium-grade, API, nontreated bentonite; therefore, it does not contain chemical treatments and is considered to be more desirable for certain applications
- The small particle size, unique flat shape and the high surface area of hydrated M-I Gel Supreme viscosifier provide superior filtration characteristics

## 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

## 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

M-I Gel Supreme viscosifier is packaged in 100-lb (45.4-kg) multi-wall paper sacks 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.

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