

# CMC Technical Grade

CMC (technical grade) is a dispersible, sodiumcarboxymethyl cellulose, fluid-loss reducing additive supplied in three grades: low viscosity, high viscosity, and extra-high viscosity.

CMC additive can be used in freshwater and seawater mud systems.

## Typical Physical Properties

Physical appearance.....	White-to-off-white powder
Specific gravity.....	1.59 (Density may vary based on grade and purity)
Solubility in water.....	Soluble
pH.....	7-10
Temperature stability.....	Stable to 250°F (120°C) in field use

## Applications

CMC technical-grade additive is used as a fluid-loss reducing additive in freshwater and seawater muds. It is less effective in brines and saltwater and is not generally recommended to be used if the salinity exceeds 50,000 ppm.

CMC Lo Vis tech-grade additive is used in high-viscosity, high-solids or heavily weighted fluids and produces only slight increases in viscosity.

CMC Hi Vis and Extra Hi Vis tech-grade additives are used in low-viscosity or low-solids fluids and increase viscosity in addition to controlling fluid loss.

## Recommended Treatments:

1. In freshwater: 0.5 to 1.5 lb/bbl (1.4 to 4.3 kg/m<sup>3</sup>)
2. In seawater: 2.0 to 3.0 lb/bbl (5.7 to 8.6 kg/m<sup>3</sup>)
3. Add slowly through a mixing hopper at a rate of 10 to 20 min/sack

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## Advantages

- Widely available and an economic source of polymer fluid-loss control
- Concentrated chemical, very effective at small treatment levels
- Can be used in most water-base drilling fluids

## Limitations

- Subject to bacterial degradation, a biocide should be used to prevent fermentation
- Not utilized in high-salinity fluids that exceed 50,000 ppm
- Not tolerant of high-pH and high-calcium-ion conditions in combination
- CMC Tech Grade additive-treated systems should be pretreated with either sodium bicarbonate or possibly citric acid prior to drilling cement

## Toxicity and Handling

Bioassay information is available upon request.

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

## Packaging and Storage

CMC Tech Grade additive is packaged in 25-kg (55-lb), heavy-duty, multi-wall, waterproof sacks.

Store in a dry location away from sources of heat or ignition, and minimize dust.

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