

# HEC

## Viscosifier

### Product Description

HEC hydroxyl ethyl cellulose is a nonionic, high-viscosity, water-soluble polymer. Chemically, it is cellulose that has been etherified to give solubility in water. It is provided as a white to light tan, free-flowing powder.

### Typical Physical Properties

Physical appearance	Off white powder
Specific gravity	1.38 - 1.40
Solubility in water	100%

### Application

HEC is a cost effective viscosifier/fluid loss control agent widely used in the following applications:

- Low Solids Drilling Fluids
- Completion and Work-over Fluids (including acids)
- Fracturing Fluids
- Horizontal Drilling
- Fluid Loss Control and Friction Reduction in Oil well Cements and Spacers.

HEC is compatible with all common drilling and completion fluid additives and will effectively viscosify clear brines ranging from low weight sodium chloride to saturated calcium chloride and bromide mixtures. In the absence of a high pH and/or high salinity, a bactericide should be used to prevent bacterial decomposition.

### Limitations

Subject to bacterial degradation. A biocide is recommended to prevent fermentation in fluids which are not saturated with salt.

### Recommended Treatment

The practical concentration limit for solutions of HEC is about 3%; above this concentration, solutions will be too viscous to handle. Although the material is not soluble in organic solvents, it is soluble in some water/organic solvent blends. Alcohol may be added, up to a level of 30%, to an aqueous solution of HEC without precipitation. To ensure lump-free solution preparation, please see the handling guidelines in Oren Hydrocarbons-Techniques for Dispersion and Dissolution.

### Toxicity and Handling

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

### Packaging and Storage

HEC is packaged in 25 kg multi wall bags with PE liner palletized wrapped & strapped. 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.

Important Note: These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and method of use of our product are beyond our control. We recommend that the prospective user determine the suitability of our material and suggestions before adopting them on a commercial scale.