

BENGEL® 62

Economical rheological additive for invert drilling fluids

GENERAL INFORMATION

BENGEL 62 rheological additive is a cost-effective organobentonite viscosifier and suspending agent for oil-based drilling fluids, invert emulsion drilling fluids and packer fluids.

BENGEL 62 is suitable for drilling fluids with a continuous phase of diesel, crude oil or mineral oil. It imparts to the formulation the temperature stable rheology characteristic of organoclays.

CHEMICAL AND PHYSICAL DATA

Composition	organic modified bentonite clay
Color	light tan
Form	finely divided powder
Specific gravity	1.8
Moisture	7.0% maximum

These are typical properties not to be used for specification purposes.

APPLICATIONS

Viscosifying drilling fluids including:

- Oil-based drilling muds
- Invert emulsion muds
- Packer fluids

Based on:

- Diesel oil
- Crude oil
- Mineral oils

ATTRIBUTES

BENGEL 62 gellant:

- Cost-effectively builds viscosity and yield point
- Suspends weighting materials and other solids
- Improves cuttings carrying capacity and hole cleaning
- Increases emulsion stability
- Aids control of fluid loss to the formation
- Confers temperature stability to the fluid
- Is not harmful to the environment

INCORPORATION

Good agitation should be used when incorporating **BENGEL 62** into the drilling system. The amount of stirring needed will depend on the temperature of the oil, the O:W, mud weight and emulsifier package. The rate of viscosity build from this organoclay increases with increasing temperature and shear. Circulation downhole after the initial mixing will aid in achieving the full viscosity and yield.

A chemical polar activator is needed to ensure full development of rheological properties. When water is present in the mud, it acts as the activator and a separate activator is not necessary. In all-oil systems, however, or in other fluids where no water is included in the formulation or where water is unwanted, a chemical activator such as methanol or propylene carbonate should be added. Mixing 5% water, by weight, into the activator can enhance efficiency.

The following activators have proved effective for **BENGEL 62** in waterless systems:

<i>Suitable chemical activators</i>	<i>Use level as percentage of BENGEL 62 weight</i>
Methanol/water (95/5)	33 %
Propylene carbonate	33 %
Propylene carbonate/water (95/5)	33 %

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LEVELS OF USE

The level of use depends on the rheological properties needed, and on the type of base oil being used. Pilot trials are recommended to optimize performance before field use.

Typical loadings are:

<u>Mud Type</u>	<u>Pounds per Barrel</u>	<u>Kg/m³</u>
Invert Emulsions		
Diesel Oil	2 - 6	6 - 17
Mineral Oil	5 - 9	14 - 25

Health and Safety Data

Before using this product please consult our Material Safety Data Sheet for information on safe handling.

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V01 Aug. 2019

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