LIG

Thinner

Product Description

LIG lignite powder oxidized is a naturally occurring material used to reduce fluid loss and deflocculate water-base muds. LIG is a partially soluble additive which provides thin, low-permeability filter cakes. It is an excellent emulsifier for oil-in-water emulsions as well as a secondary deflocculant and is especially effective in high-temperature applications. It performs exceptionally well in dispersed systems as a synergistic additive with lignosulfonates. It can be used in virtually any water-base fluid.

Typical Physical Properties

Physical appearance	Black powder
Specific gravity	1.6 - 1.8
pH (1% solution)	4 - 5
Bulk density	52 lb/ft3 (833 kg/m^3)
Typical grind	90 - 95% <20 mesh

Application

LIG additive can be used for rheology and filtration control in all water-base muds. It is especially effective in stabilizing the properties of muds exposed to high temperatures and contaminants such as CO_2 and calcium. LIG additive is especially effective when treating cement contamination. It reduces the high viscosity and pH of cement-contaminated muds and reacts with calcium to lessen the contaminating effects.

Advantages

- Provides improved filtration control
- Reduces viscosity and gel strengths
- Significantly extends the temperature stability of water-base fluids
- Resists the effects of contamination
- Improves filter-cake quality by reducing its thickness and permeability
- Reduces wall-sticking tendencies
- Stabilizes rheological properties
- Compatible with a wide range of water-base systems
- Especially effective when treating cement contamination

Limitations

- Less effective at pH levels below 9.5

Recommended Treatment

Normal treatments of LIG range from 1 to 8 lb/bbl (2.85 to 22.8 kg/m^3). Due to their low pH, LIG treatments require additional caustic soda or an alternative alkaline material, to maintain a consistent pH. A normal ratio is one sack of caustic soda for every four sacks of LIG. In high-salinity systems, it is preferable to premix the LIG in medium-pH freshwater to enhance dispersibility, and then add the premix to the active system. It is most effective in mud systems with an alkaline pH in the range of 9 to 11.

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Packaging and Storage

LIG is packaged in 50-lb (22.7-kg), multi-wall, paper sacks. Store in a dry location away from sources of heat or ignition, and minimize dust.