

# TANNATHIN

TANNATHIN\* oxidized lignite is a naturally occurring material used to reduce fluid loss and deflocculate water-base muds. TANNATHIN lignite 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 defloculant 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/ft <sup>3</sup> (833 kg/m <sup>3</sup> )
Typical grind.....	90-95% <20 mesh

### Applications

TANNATHIN 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<sub>2</sub> and calcium. TANNATHIN 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.

Normal treatments of TANNATHIN lignite range from 1 to 8 lb/bbl (2.85 to 22.8 kg/m<sup>3</sup>). Due to their low pH, TANNATHIN lignite 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 TANNATHIN lignite. In high-salinity systems, it is preferable to premix the TANNATHIN lignite in medium-pH freshwater to enhance dispersibility 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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## 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

## 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

TANNATHIN additive is packaged in 50-lb (22.7-kg), multi-wall, paper sacks.

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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