



## Petroleum Products

# Super Lig<sup>®</sup>

### Lignite

Super Lig is a North Dakota lignite that naturally contains a high content of humic acids. It is an economical thinning agent for use in all freshwater mud systems and an excellent emulsion stabilizer and viscosity reducer in high temperature drilling operations. Super Lig is highly soluble, heat stable at all drilling depths and an effective thinning agent in both high and low pH mud systems.

### Advantages

- Maintains filtrate resistivity at higher values in low pH muds
- Tolerant of other mud additions in moderate quantities
- Effective in both fresh and salt water systems, although high salt concentrations will reduce the effectiveness of treatment
- Meets all applicable petroleum industry standards for processed liquids and humic acid product quality

### Technical Specifications

Product	Bulk Density (lbs./ft <sup>3</sup> )	Moisture (As Shipped)	pH	Mesh Sizing	Solubility	Color
Super Lig	Typically 45	14% to 22%	3.5 - 5.0 @ 1% solids	35% minimum passing 200 mesh (74 microns)	65 - 85% typical	Blackish brown

Packaging: Bulk or palletized in carload and truckload quantities. 50 lbs. multiwall, water-resistant bags or 2,000 lbs. bulk bags.

### Typical Chemical Analysis

Product Dry Basis (% by Weight)	Bulk Density (lbs./ft <sup>3</sup> )	Moisture	pH
Carbon	52.5	Na <sub>2</sub> O	0.54
Oxygen	24.0	MgO	1.23
Hydrogen	3.4	CaO	2.73
Nitrogen	1.2	Fe <sub>2</sub> O <sub>3</sub>	1.57
Sulphur	1.6	Al <sub>2</sub> O <sub>3</sub>	1.53
Ash	17.3	K <sub>2</sub> O	0.13

