

**Technical Data Sheet**  
**Lignite**

Revised 1/25/07

## SUPER-LIG®

<b>Description</b>	North Dakota lignite that naturally contains a high content of humic acids. Super-Lig is an economical thinning agent for use in all freshwater mud systems.
<b>Functional Use</b>	Super-Lig is highly soluble, heat stable at all drilling depths and is an effective thinning agent in both high and low pH mud systems. Super-Lig is an excellent emulsion stabilizer and viscosity reducer in high temperature drilling operations.
<b>Advantages</b>	Super-Lig will maintain filtrate resistivity at higher values in low pH muds. Super-Lig is tolerant of other mud additions in moderate quantities. Super-Lig is effective in both fresh and salt water systems, although high salt concentrations will reduce the effectiveness of treatment. Super-Lig meets or exceeds all applicable petroleum industry standards for processed liquids/humic acid product quality.
<b>Mesh Sizing</b>	Minimum 35% passing 200 mesh (74 microns)
<b>Solubility</b>	65% - 85%

### Typical Chemical Analysis

Dry Basis (% by Weight)			
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

<b>pH</b>	3.5 - 5.0 @ 1% solids
<b>Color</b>	Blackish Brown
<b>Bulk Density</b>	Typically 45.0 lbs/ft <sup>3</sup>
<b>Moisture</b>	14% to 22 % as shipped
<b>Packaging</b>	Bulk or palletized in carload and truckload quantities. 50 lb. multiwall, water-resistant bags or 2,000 lb. bulk bags.

**Disclaimer:** The information and data contained herein are believed to be accurate and reliable. ACC makes no warranty of any kind and accepts no responsibility for the results obtained through application of this information