

MICRO-GEL

Bentonite

DESIGNED AND ENGINEERED FOR MICRO-TUNNELING

Micro-Gel is a bentonite product designed and engineered for micro-tunneling and tunneling applications. It is engineered to promote low fluid loss and increased lubricity, which translates to low jacking pressures. The integrity of the tunnel wall is maintained by the effect of the superior filter cake and gel strengths exhibited by a **Micro-Gel** fluid.

Uniquely **Micro-Gel** can be used both as the slurry fluid, carrying the cuttings away from the cutter head, and the lubricating fluid. Each function will necessitate a different mix ratio, but the contractor using **Micro-Gel** needs only one bentonite product on location. **Micro-Gel** mixes easily through most conventional mixing systems.

Micro-Gel is environmentally safe and non-hazardous. **Micro-Gel** has been designed to be resistant to many chemicals found in tunneling operations. **Micro-Gel** has a very high tolerance for calcium and salts, making it an ideal fluid for any tunnel with salt water influence.

Micro-Gel is NSF Certified to NSF/ANSI 60.

APPLICATION

Losing the fluid phase of a slurry into the soil can compromise the integrity of the formations. This can allow materials to fall in against the segments, increasing drag and elevating jacking pressures. **Micro-Gel** slurries protect against excessive fluid loss by laying down a thin tough filter cake that limits the water phase influence on surrounding formations.

Traditionally used slurries demonstrate fluid loss values nearly twice the level of **Micro-Gel**.

MIXING & HANDLING

Used as a Slurry Fluid: Maintaining formation integrity while cutting lays the foundation that keeps jacking pressures low. Using **Micro-Gel** as the slurry fluid limits negative impact on soils and maintains the bore wall continuity. Mixing rate should be 320 pounds of **Micro-Gel** per 1000 gallons (144kg/3.8 m³). Fluid characteristics will have a Marsh Funnel Viscosity of 45 to 48 sec/qt.

Using as a Lubricating Fluid: For best results, a venturi or other high-shear equipment should be used. Mix rate is 22.5 pounds per barrel or 535 pounds per 1000 gallons (241 kg/3.8m³) of make-up water. This mix ratio will yield a Marsh Funnel Viscosity of 80 to 85 secc/qt.

WHMIS: Controlled (see MSDS)

TDG: Not regulated

Packaging: 50 lb bag

