



MTA-1TM



MTA-1TM is a unique additive designed to condition the lubricating fluid in micro-tunneling operations. At very small addition rates MTA-1TM reduces fluid loss characteristics, slightly relaxes gel strengths, and promotes low jacking pressures.

Using a combination of MICRO-GELTM and MTA-1TM as a Lubricating Fluid, formations are protected by laying down a thin tough filter cake thus limiting the water phase of the slurry from entering the formation and weakening it. At the same time, the annular space outside the segments is kept uniform and friction is reduced allowing segments to move forward with lower jacking pressures.

Mixing and Application of Lubricating Fluid

For best results, mix MICRO-GELTM through a venturi or other high-shear equipment. The addition rate is 22.5 pounds per barrel or 535 pounds per 1000 gallons (241 kg/3.8 m³) of make-up water. This mix ratio will yield typical fluid characteristics as follows:

Marsh Funnel Viscosity	80-85 seconds/quart
Fluid Loss	8.4 cc
10 Second Gel	18
10 Minute Gel	45

Once the MICRO-GELTM is hydrated, add MTA-1TM at the rate of 2 to 3 ounces per 1,000 gallons (90 ml/3.8 m³). This drops the fluid loss values in the lubricating fluid to a range of 5-7 cc and further aids in reducing jacking pressures.

MTA-1TM is conveniently packaged in 1-gallon plastic jugs, four per case.