**Lube-167**

*Lube-167* water-dispersible lubricant is designed to decrease the coefficient of friction in all water-base drilling fluids, which lowers torque and drag in the wellbore.

It also has a unique wettability characteristic which lowers the potential for Bottom-Hole Assembly (BHA) balling. Lube-167 lubricant contains no hydrocarbons and is compatible with all water-base fluids.

**Typical Physical Properties**
- **Physical appearance**: Light brown liquid
- **Odor**: Mild
- **Solubility in water**: Insoluble
- **Specific gravity**: 0.96-1.01
- **pH**: 8.8-9.2 (1% solution)
- **Flash point**: 240°F (116°C) (PMCC)

**Applications**
*Lube* 167 lubricant is completely water dispersible and blends easily into all mud systems. It does not foam and can be added to the mud system through the mixing hopper or directly to the surface system wherever good agitation is available.

*Lube*-167 additive should be used at an initial concentration of 1 to 3% by volume (3.5 to 10.5 lb/bbl or 8.6 to 30 kg/m³) for optimum performance. For mud densities above 12 lb/gal, higher concentrations of *Lube*-167 additive are normally required.

After the initial treatment, periodic treatments should be made to maintain the desired concentration. Higher concentrations can be necessary for pills and special applications. Treatment levels and product usage depend on the rate of penetration, solids-control equipment and dilution rates.

**Advantages**
- Effective, all-purpose lubricant for water-base mud systems
- Decreases the coefficient of friction which reduces torque and drag
- Does not increase rheology or gel strengths
- Contains unique metal-wetting additives which reduce the tendency of soft, sticky shales (gumbos) to cause bit and BHA balling
- May be used at all bottom-hole temperatures
- Does not cause foaming
- Does not cause a sheen when dispersed in drilling fluids at 4% by volume or less

**Limitations**
- May “grease” in mud systems with soluble hardness greater than 600 mg/l and high pH levels
- May cause slight foaming in freshly built, ultra-low-solids seawater systems

**Toxicity and Handling**
Bioassay information is available upon request.

Handle as an industrial chemical, wearing protective equipment and observing the precautions described in the Material Safety Data Sheet (MSDS).
Packaging and Storage

Lube-167 lubricant is available in 55-gal (208-L) drums.

Store in a dry well-ventilated area. Keep container closed. Keep away from heat, sparks and flames. Store away from incompatibles. Follow safe warehousing practices regarding palletizing, banding, shrink-wrapping and/or stacking.