KOPR-KOTE®

TOOL JOINT & DRILL COLLAR COMPOUND

DESCRIPTION

KOPR-KOTE® drill collar and tool joint compound is a Premium quality, unleaded compound containing copper flake, graphite, and other natural extreme pressure and anti-wear additives. **KOPR-KOTE's** solids package is formulated to prevent excessive circumferential makeup by increasing the coefficient of friction under compressive forces. As stress levels rise above 50% of yield, the friction factor increases, limiting downhole makeup. Full hydraulic joint efficiency is maintained allowing joint shoulder faces to mate completely without standoff or deformation. For invert or high-pH muds, use Jet-Lube® EXTREME®. For wedge-type thread connections, use NCS-30® ECF™ for best thread-wear protection.

- Not classified as a marine pollutant - DOT Approval CA2004080025
- Contains no lead or zinc.
- NSF H2 Registered
- Extreme-pressure additives provide additional protection against seizing and galling and allow consistent make- up.
- Aluminum-complex grease base protects against rust and corrosion.
- Sticks to wet joints.
- Unequaled resistance to makeup down-hole.
- Available in Arctic, Thermal, and Specialty grades.
- Approved by NAM/Shell for under-balanced drilling applications.

For optimum performance on API drill string connections, **KOPR-KOTE®** should be **utilized with the torque charts in API RP7G by multiplying the torque value by 1.15** or by contacting the drill pipe and connection manufacturer. Friction factors for **KOPR-KOTE** were developed using full scale API tool Joint connections.

Premium drill string connections such as HI-TORQUE® (HT), eXtreme® Torque (XT®) and XT-M™ connections, etc., utilize make-up torques based upon thread compound friction factors of 1.0. Therefore, use the torque provided by the premium connection manufacturer. Adjusting make-up torque based on thread compound friction factor may still be advised.

SERVICE RATING:
0°F (-18°C) TO 450° (232°C)

PRODUCT CHARACTERISTICS

Thickener	Complex soap
Fluid Type	Petroleum
Dropping Point (ASTM D-2265)	450°F (232°C)
Specific Gravity	1.15
Density (lb/gal)	9.6
Oil Separation (ASTM D-6184) WT. % LOSS @ 212°F (100°C)	<3.0
Flash Point (ASTM D-92)	>430°F (221°C)
NLGI Grade	1
Penetration @ 77°F (ASTM D-217)	310 - 330
Copper Strip Corrosion (ASTM D-4048)	1A, typical
4-Ball (ASTM D-2596) Weld Point, kgf	800, typical
Friction Factor*	1.15 (standard service)
(Relative to API RP 7G)	1.25 (very severe service)

* Many factors such as pipe size, thread geometry, drilling mud contamination, etc. affect the friction factor. This is a relative number and in all applications experience and prior knowledge should be used to adjust make-up torque accordingly. Contact your drill pipe manufacturer for torque and friction- related specifications.

Environmental Rating:
UK CEFAS OCNS Group B

For package types and part numbers contact sales@jetlube.com***.***

LIMITED WARRANTY

For warranty information please visit
http://www.jetlube.com/pdf/Jet-Lube_Warranty.pdf