# **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 antiwear 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 makeup.
- Aluminum-complex grease base protects against rust and corrosion.
- · Sticks to wet joints.
- Unequaled resistance to makeup downhole.
- 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 or by contacting the drill pipe and connection manufacturer.

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	Aluminum Complex
Fluid Type	Petroleum
Dropping Point	450°F (232°C)
(ASTM D-2265)	
Specific Gravity	1.15
Density (lb/gal)	9.6
Oil Separation (ASTM D-6184)	<3.0
WT. % Loss @ 212°F (100°C)	
Flash Point (ASTM D-92)	>430°F (221°C)
NLGI Grade	1
Penetration @ 77°F	310 - 330
(ASTM D-217)	
Copper Strip Corrosion	1A, typical
(ASTM D-4048)	
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 frictionrelated specifications.

#### **PACKAGING**

Code No.	<b>Container Size</b>	Shipping Wt
10123	1 gal.	11 lb.
10113	2½ gal.	26 lb.
10115	5 gal.	52 lb.
10124	15 gal.	152 lb.
10129	50 gal.	514 lb.

#### LIMITED WARRANTY

Jet-Lube, Inc. makes the Limited Express Warranty that at the date of delivery, this product shall be free from defects in Jet-Lube, Inc. materials and workmanship.

This Limited Express Warranty is expressly in lieu of any other express or implied warranties, including any implied warranty of merchantability or fitness for a particular purpose, and of any other obligation on the part of Jet-Lube, Inc.

The sole remedy for breach of the Limited Express Warranty shall be the refund of the purchase price. All other liability is negated and disclaimed, and Jet-Lube, Inc. shall not be liable for incidental or consequential damages.

## **CORPORATE LOCATIONS**

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