

# TUFF E NUFF

## Tool Joint Compound



### TECHNICAL DATA SHEET

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#### DESCRIPTION

**JET-LUBE TUFF E NUFF** Tool Joint Compound is a high quality product containing premium grade copper flake, amorphous graphite, CZ-EX (Jet-Lube's patented extreme pressure additive), H<sub>2</sub>S and corrosion inhibitors, and other components. All are blended in Jet-Lube's unique grease compounded from custom-refined, low sulfur oil to ensure brushability over a wide temperature range, tenacious adherence to all surfaces, resistance to water washout, and prevention of rust and corrosion.

Utilizing Jet-Lube's unique make-up monitor, which combines a Varco TW-60 torque wrench with sophisticated electronic measuring and recording devices, **TUFF E NUFF** is formulated to provide superior performance on the rig floor and downhole in light duty drilling, just as KOPR-KOTE and LBX-SPECIAL perform in more severe conditions. It has the ability to retard circumferential makeup so that at recommended torques, stresses within connections are not excessive, while resisting additional downhole makeup in drilling.

#### APPLICATIONS

**TUFF E NUFF** is recommended for use on tool joints in drilling shallow depths and softer formations. It provides consistent control of makeup and breakout in these conditions and protects against galling and seizure. **TUFF E NUFF** prevents excessive stresses which shorten tool joint life, and the solids present form a soft gasket on the threads and shoulders which prevent metal-to-metal contact under loads imposed downhole.

#### OPERATING RANGE

Temperatures from -18°C to 205°C (0°F to 400°F)



#### CHARACTERISTICS

- Contains no lead or zinc.
- Formulated with a proprietary blend of copper, graphite, and other additives for unequaled protection in light duty drilling.
- CZ-EX<sup>®</sup> Extreme Pressure Additive provides additional protection against galling and wear.
- Inhibitors protect against H<sub>2</sub>S and corrosion.
- Unique grease base for brushability over a wide temperature range.
- Sticks to wet joints.
- Consistent rig floor makeup.
- Unequaled resistance to further makeup downhole in light duty drilling.

#### PRODUCT SPECIFICATIONS

Thickener	Aluminum Stearate
Fluid Type	Petroleum
Color/Appearance	Black/Brown
Dropping Point (ASTM D-566)	91°C (195°F)
Specific Gravity, Typical	.98
Density (kg/liter), Typical	.98
Oil Separation, Wt. % Loss @ 100°C (212°F)	<3.0%
Flash Point (ASTM D-92)	>221°C (430°F)
Water Spray-Off (ASTM D-4049)	<10%
NLGI Grade	2
Copper Strip Corrosion (ASTM D-4048)	1A

#### PACKAGING

Inventory Code	Container Size	Container
11115	15 Liter	Pail
11155	55 Liter	Keg
11175	205 Liter	Drum

#### LIMITED WARRANTY

Jet-Lube of Canada makes the Limited Express Warranty that at the date of delivery, this product shall be free from defects in Jet-Lube of Canada Ltd. 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 of Canada Ltd.

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 of Canada Ltd. shall not be liable for incidental or consequential damages.