Thermal-Seal



All-Star is a premium quality rotary joint thread compound that is blended for drill collars in extreme pressure and high torque conditions. The formula contains 60% of finely powdered metallic lead that is used to absorb shock as well as seal the connection under pressure.

Non-metallic particles are used in the formulation to prevent metal compaction in the shoulder and thread roots. This ensures a clean breakout during tripping cycles

> SERVICE RECOMMENDATIONS

Thermal-Seal is to be used on conventional API tubing in high temperature production environments.

▶ PERFORMANCE CHARACTERISTICS

- A partial synthetic base carrier provides temperature stability in steam injection operations
- Blended with anti-seize additives to prevent galling and thread damage during break-out
 of tubulars

▶ PRODUCT SPECIFICATIONS

Thickener Calcium Sulfonate Complex

Fluid Type Petroleum

Flash Point > 180°C / 356°F Service Rating 200°C / 392°F

NLGI Grade 1

Color Copper Friction Factor 1.06

Pen Range 300 – 360 (ASTM D217) seasonal adjustment

Brushability $-18^{\circ}\text{C}/0^{\circ}\text{F}$ Drop Point $> 204^{\circ}\text{C}/400^{\circ}\text{F}$

PACKAGING

10 l steel / 2.5 gallon Net 15.9 kg / 35 lb

Note: The torque correction factor is influenced by a variety of conditions such as pipe size, thread geometry, drilling mud contaminants, and drilling environment. In all applications experience and prior knowledge should be used to adjust make-up torques as the torque correction number provided is relative.

Warranty: This compound shall be free of defects at time of manufacture. Warranty shall be limited to the refund of the purchase price. All other liability is negated and disclaimed and Topco Oilsite Products shall not be liable for consequential or incidental damages.











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