



A CSW Industrials Company

'21'[®]

DOUBLE DUTY TOOL JOINT COMPOUND

DESCRIPTION

'21' is a double duty, tool joint compound formulated to provide a superior level of performance for the increasing demands of today's oilfield market. The lead free formulation contains copper flake as the only metallic component and is fortified by a unique blend of natural, inorganic extreme pressure and anti-wear additives. Yet with all its superior abilities, '21' remains a medium priced product.

'21' can be used throughout the entire drill string "from the kelly to the bit" on drill collars, tool joints and all subsurface drilling tools

ADVANTAGES

- Contains no Lead or Zinc.
- Formulated with a proprietary blend of copper, graphite, and other additives for protection in hostile drilling environments.
- Extreme Pressure additive provides additional protection against seizing and galling.
- Inhibitors protect against rust and corrosion.
- Sticks to wet joints.
- Aluminium base grease for brushability and stability over a wide temperature range.
- Consistent rig floor makeup.
- Prevents high stress in drill pipe connections, which shortens their useful life.
- **Available in Arctic and Thermal grades.**

'21' has been designed to utilise the makeup charts in API RP7G. In more severe drilling situations such as high speeds, high penetration rates, deviated holes, or hard formations, drill collars and other rotary shouldered connections can be made-up to a higher figure.

APPLICATIONS

'21' is recommended for the entire drill string in most drilling conditions. Typical conditions for **21 Thermal** would include geothermal wells and problem holes involving high temperatures.

PRODUCT CHARACTERISTICS

Service Ranges:

Standard: -18°C (0°F) to 232°C (450°F)
Arctic: -55°C (-65°F) to 205°C (400°F)

Thickener	Aluminium complex
Fluid Type	Petroleum
Dropping Point (ASTM D-566)	>232°C(450°F)
Specific Gravity	1.1
Oil Separation	<5.0
Wt. % Loss @ 212°F (100°C)	
Flash Point (ASTM D-92)	>221°C (430°F)
NLGI Grade	1
Penetration @ 77°F (ASTM D-217)	310-330
Copper Strip Corrosion (ASTM D-4048)	1A
Shell 4-Ball (ASTM D-2596)	
Weld Point, kgf	620
Friction Factor (Relative to API RP7G)	1.15

PACKAGING

Code No.	Size	Container
JA11023	4kg	Plastic pail
JA11012	12.5kg	Metal pail
JA11093	20kg	Metal pail
JA11029	204.5kg	Drum

LIMITED WARRANTY

Jet-Lube (UK) Limited makes the Limited Express Warranty that at the date of delivery, this product shall be free from defects in Jet-Lube (UK) Limited 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 (UK) Limited. 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 (UK) Limited shall not be liable for incidental or consequential damages

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