

# PETRONAS CIRCULA MILL NT SERIES

## Premium Performance Anti-wear Circulating Oil

PETRONAS Circula Mill NT Series are premium performance anti-wear circulating oils specially developed for Morgan No-Twist Mill system.

Formulated with high quality selected mineral base oils enhanced with advanced anti-wear, extreme pressure, anti-oxidant, anti-rust and anti-foam additives, PETRONAS Circula Mill NT oils provide excellent anti-wear protection, high water separability, high rust and corrosion protection and long lasting performance.

PETRONAS Circula Mill NT Series meet the MORGOIL® No-Twist Mill Lubricant Specification.

### Applications

PETRONAS Circula Mill NT Series are recommended for use in:

- MORGOIL® No-Twist steel mill circulating systems
- highly loaded anti friction and plain bearings that operate at high speeds and temperature even when contaminated with water
- MORGOIL® No-Twist dual steel mill circulating systems

### Features and Benefits

Features	Benefits
High water separability	Due to high water separability the system is protected from water degenerative effects, maintaining circulating system efficiency at required level and reducing maintenance costs
Excellent anti-wear protection	Protects equipment components from excessive wear and provides longer equipment life
Extreme pressure protection	Good extreme pressure performance in severely loaded anti friction bearings
Good thermal and oxidation stability	Maintains performance levels under high temperatures and pressure, enabling long oil drain intervals
High rust & corrosion protection	Inhibits the corrosion process that occurs in presence of water, improving equipment life
Excellent foam stability	Maintains excellent efficiency in circulating systems, ensures smooth operation. Protects the system from air degenerative effects reducing maintenance costs
High multi metal compatibility	Compatible with most metal alloys ensuring trouble free performance of the system
High compatibility with most seal and elastomers	Compatible with most seals and elastomers, which prevents oil leaks and contamination due to seal erosion



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Technical Data Sheet  
Version 2.0\_16.02.2018

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### Typical Properties

Characteristic	Method	Specification	100	460
Specific Gravity @15°C	ASTM D 4052	(1)	0,887	0,898
Kinematic Viscosity at 40°C, cSt	ASTM D 445	Min. 93	100	460
Kinematic Viscosity at 100°C, cSt	ASTM D 445	(1)	11,1	31,5
Viscosity Index, min	ASTM D 2270	Min. 95	96	99
Flash Point, °C	ASTM D 92	Min. 224	230	234
Pour Point, max °C	ASTM D 97	Max. -12	-18	-12
TAN, mgKOH/g	ASTM D 664	(1)	0,16	0,16
Water Separability, 40/37/3 – mins	ASTM D 1401	Max. 25	15	15
Copper Strip Corrosion	ASTM D 130	(1)	1b	1b
Foam Sequence I, mL		Max. 0/0	0/0	0/0
Foam Sequence II, mL	ISO 6427	Max. 0/0	0/0	0/0
Foam Sequence III, mL		Max. 0/0	0/0	0/0
Weld Load, Kgf	ASTM D2783	Min. 150	200	200
FZG, Stages Passed	ISO 14635-1	Min. 12	>12	>12

All technical data is provided for reference only and all specification based on MORGOIL® No-Twist Mill Specification  
(1): not required in the specification / SS is available upon request including quality control limits

### Performance Levels

- MORGOIL® No-Twist Mill Lubricant Specification

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### Health, Safety and Environment

This product is unlikely to present any significant health and safety hazards when used in the recommended application. Avoid contact with skin. Wash immediately with soap and water after skin contact. Do not discharge into drains, soil or water.

For further detail regarding storage, safe handling, and disposal of product, please refer to product SDS or contact us at: [www.pli-petronas.com](http://www.pli-petronas.com)

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