

**Technical Data Sheet**

Revision Date: 27.02.2025

# PETRONAS CIRCULA MILL SERIES

## High Performance Circulating Oil

PETRONAS Circula Mill Series is high performance circulating oil specially developed for steel mill equipment where MORGOIL® lubricant is recommended.

Formulated with high quality selected mineral base oils enhanced with advanced anti-oxidant, anti-rust and anti-foam additives, PETRONAS Circula Mill oils provide excellent water separability\*, high rust and corrosion protection and very good oxidation stability for longer lasting performance.

PETRONAS Circula Mill Series meet or exceed key industrial specifications and the MORGOIL® Advanced Lubricant Specification.

\*better performance compared to typical industrial standards for MORGOIL® Lubricant Specification based on UEC Dynamic Demulsibility Endurance Test.

### Applications

PETRONAS Circula Mill Series are recommended for use in:

- MORGOIL® circulating systems requiring high quality circulating oils

### Features & Benefits

Features	Benefits
Excellent water separability	Due to excellent water separability the system is protected from water degenerative effects, maintaining circulating system efficiency at required level and reducing maintenance costs
Very good oxidation stability	Maintains performance levels under regular temperatures and pressure
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
Very good 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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### Typical Properties

Characteristic	Method	Specification	460	680
Specific Gravity @15°C	ASTM D 4052	(1)	0,898	0,904
Kinematic Viscosity at 40°C, cSt	ASTM D 445	±10%	460	680
Kinematic Viscosity at 100°C, cSt	ASTM D 445	±10%	31,3	42,0
Viscosity Index	ASTM D 2270	Min. 90	98	103
Flash Point, °C	ASTM D 92	Min. 195	302	290
Pour Point, °C	ASTM D 97	(1)	-15	-12
TAN, mgKOH/g	ASTM D 664	Report	0,05	0,05
Water Separability, 40/37/3 - mins	ASTM D 1401	(1)	10	10
Dynamic Demulsibility Endurance, %	Run at Clark Labs			
- % water in oil after centrifuging		Max. 10%	9%	8%
- % oil in water after centrifuging		Max. 1%	0%	0%
Copper Strip Corrosion	ASTM D 130	Max. 1	1b	1b
Foam Sequence I, mL	ASTM D 892	50/0	0/0	0/0
Foam Sequence II, mL		50/0	0/0	0/0
Foam Sequence III, mL		50/0	0/0	0/0

All technical data are provided for reference only and all specifications are based on MORGOIL® Advanced Lubricant Specification

(1): not required in the specification / SS is available upon request including quality control limits

### Performance Levels

- DIN 51517 Part II
- MORGOIL® Advanced 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 details 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).

### Important Note

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Safety Data Sheets are available for all our products and should only be consulted for appropriate information regarding storage, safe handling and disposal of the product. No responsibility shall be taken by either PLISB or its subsidiaries and related holding corporation for any loss or injury or any direct, indirect, special, exemplary, consequential damages or any damages whatsoever, whether in action of contract, negligence or other tortious action, in connection with or resulting from abnormal use of the materials and/or information, from any failure to adhere to recommendations, or from hazards inherent in the nature of the materials and/or information. All products, services and information supplied are under our standard conditions of sale. Please consult with any of our local representatives in the event you require any further information.