

Mobil Vacuoline 500

Circulating Oils

Product Description

Mobil Vacuoline 500 Series are extra high performance heavy duty circulating oils specifically designed to meet the critical requirements of high speed No-Twist Rod Mills, manufactured by Morgan Construction Company and Danieli. They are also suitable for the rolling mill circulation systems of primary and mini-mill bearings. They are formulated from high quality base stocks and a proprietary additive system to provide enhanced film strength, antiwear and anti-scuff properties.

The oils have good wettability and provide extra oil retention and thin film protection against rust and corrosion on gears, shafts, bearings, adjusting screws and all housing sections. Mobil Vacuoline 500 Series have excellent antiwear properties that eliminates scuffing and scoring of high-speed gearing, particularly important in non-ferrous rod mills where the gears are more heavily loaded. The Mobil Vacuoline 500 Series possess good demulsibility that is retained under conditions of severe water contamination.

Mobil Vacuoline 500 Series products enjoy strong support from equipment builders, and their exceptional performance over many decades, have made them the lubricant of choice of many mill operators, world-wide.

Features & Benefits

The "Mobil Vacuoline" family of products is well known and highly regarded worldwide based on their outstanding performance and the R&D expertise and the global technical support which stand behind the brand. The exceptional performance of Mobil Vacuoline 500 Series oils, has made it the choice of no-twist rod mill manufacturers and operators around the world for many decades.

Close contacts with mill designers worldwide is the key factor in our understanding of the challenges for the lubricant in the most advanced designs. Our research scientists use this information to ensure the proper formulation of products like Mobil Vacuoline 500 Series, to meet the severity requirements of the latest mill designs. It is with this background and understanding that we are able to develop the advanced lubricant technology that meets or exceeds the evolving technical requirements of the equipment.

For Mobil Vacuoline 500 Series oils, this work has resulted in a formulation based on a high quality base stocks, along with specially chosen additives, to provide exceptional antiwear, rust and corrosion protection and excellent demulsibility which results in superb equipment protection, highly reliable operation and long oil charge life. A review of the features, advantages and potential benefits of the product are shown below.

Features	Advantages and Potential Benefits
Good protection against rust and corrosion through a balanced high performance lubricant formulation	Fewer unscheduled stoppages and lower maintenance costs
Outstanding antiwear performance	Excellent protection of critical bearings and gearing
Excellent water separation characteristics	Rapid separation of water for smooth, efficient operation, reduced downtime and undiminished wear protection
High resistance to oxidation and thermal degradation	Long oil charge life and avoidance of costs of unanticipated production interruptions

ExxonMobil Lubricants & Specialties

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Features	Advantages and Potential Benefits
Consistent formulation using high quality components, world-wide	Reliable performance, world-wide

Applications

- Mobil Vacuoline 500 Series lubricants are recommended for use in both ferrous and non-ferrous Morgan No-Twist Rod Mills and Morgoil back-up roll bearing systems. For optimum performance, appropriate viscosity oils should be selected according to the loading and for operations without hydrostatic lift
- Mobil Vacuoline 525 is recommended for service in the single circulating oil system of high-speed rod mills. Such mills operate at speeds greater than 105 m/sec, with speeds of over 120 m/sec being projected in the future. These mills operate under severe loads in the presence of continuous water contamination. The balanced formulation of Mobil Vacuoline 525 enables extended trouble-free rod production to be achieved
- The remaining grades in the Mobil Vacuoline 500 Series are recommended for Morgan No-Twist Rod Mills, which have two lubrication systems. The higher viscosity oils are used in the roughing stands, while the lower viscosity grades are used in the higher-speed finishing stands

Specifications & Approvals

Mobil Vacuoline 500 Series meets or exceeds the following industry specifications:	525	528	533	537	546	548
Meets or Exceeds MORGOIL "No -twist rod mill" Lubricants Specification						X

Typical Properties

Mobil Vacuoline 500 Series	525	528	533	537	546	548
ISO Viscosity Grade		150	220	320	460	680
Viscosity, ASTM D 445						
cSt @ 40°C	92.7	146	218	325	436	677
cSt @ 100°C	10.7	14.4	18.8	24.4	29.4	369
Viscosity Index, ASTM D 2270	99	96	96	96	95	89
Pour Point, °C, ASTM D 97	-21	-21	-18	-12	-15	-9
Flash Point, °C, ASTM D 92	264	272	284	288	286	286
Specific Gravity @ 15.6 °C kg/l, ASTM D 1298	0.88	0.89	0.89	0.90	0.90	0.92
Demulsibility at 82°C, ASTM D1401 Minutes to 3ml	25	10	15	5	5	5



Mobil Vacuoline 500 Series	525	528	533	537	546	548
Demulsibility for non-EP oils, ASTM D2711, ml water	39	38	36	39	35	36
Rust Protection, ASTM D665						
Distilled Water	Pass	Pass	Pass	Pass	Pass	Pass
Sea Water	Pass	Pass	Pass	Pass	Pass	Pass
Foaming Characteristics, ASTM D 892 Seq I, II, III; Tendency/Stability, ml/ml						
Seq I	0/0	0/0	0/0	0/0	0/0	0/0
Seq II	0/0	0/0	0/0	0/0	0/0	0/0
Seq III	0/0	0/0	0/0	0/0	0/0	0/0
Copper Corrosion, ASTM D130 3 hours @ 100°C	1A	1A	1A	1A	1A	1A
FZG Gear Test, DIN 51354, Failure Stage	12	12	12	12	12	12

Health & Safety

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application and the recommendations provided in the Material Safety Data Sheet (MSDS) are followed. MSDS's are available upon request through your sales contract office, or via the Internet. This product should not be used for purposes other than its intended use. If disposing of used product, take care to protect the environment.

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