Mobil

Morgan No-Twist® Oil Series

Mobil Industrial , Denmark

Premium Circulating Oils

PRIMETALS TECHNOLOGIES

Product Description

The Morgan No-Twist® Oil series is a high performance family of heavy duty circulating oils specifically designed to meet the critical requirements of No-Twist rod mills manufactured by Primetals Technologies. Their versatile performance makes them an excellent choice for circulation systems lubricating gears and bearings.

The excellent performance of Morgan No-Twist® oils in Primetals Technologies rod mills is due to a carefully balanced formulation providing superior wettability, extra oil retention and thin film protection against rust and corrosion. In addition, these lubricants also provide excellent resistance to oxidation and thermal degradation, and a high level of wear protection.

Morgan No-Twist® oils also have excellent demulsibility especially at mill operating temperatures which typically are lower than the ASTM D1401 test methods. This allows water and other contaminants to separate readily in the system reservoir. Morgan No-Twist® Oils are available in three viscosity grades.

Features and Benefits

Morgan No-Twist® oils utilize the same technology found in Mobil Vacuoline 500 series oils, whose proven performance has made them the primary choice of Primetals Technologies equipment owners worldwide. Morgan No-Twist® oils are recommended by Primetals Technologies for their equipment, as well as hydraulic systems and a variety of ancillary equipment. They are supported with the joint expertise and field technical services offered by Mobil and Primetals Technologies.

Features	Advantages and Potential Benefits
Strong rust and corrosion protection through a balanced lubricant formulation	Fewer unscheduled stoppages and lower maintenance costs
Outstanding anti-wear performance	Excellent protection of critical bearings and gears
Excellent demulsibility characteristics	Rapid water separation for smooth, efficient operation, less downtime and uncompromised wear protection
High resistance to oxidation and thermal degradation	Long oil charge life and cost avoidance for potential production interruptions
Multiple application capability	Inventory savings

Applications

Morgan No-Twist® oils are intended primarily for plain bearings, roller bearings, parallel shaft and bevel gearing. They are suitable as multipurpose lubricants in systems not subject to shock loading or which do not require extreme pressure performance. They are suitable for applications using splash, bath and slinger ring arrangements and all other application methods involving pumps, valves and auxiliary equipment. They are recommended for use in hydraulic systems where higher viscosity oils are specified. They are particularly resistant to the effects of prolonged high temperature exposure and perform well in circulating systems with short oil residence times.

Typical applications include:

- Primetals Technologies system B-1 (ISO 320), B-2 (ISO 220) and C (ISO 100) mills

- Moderate duty spur, bevel, helical and herringbone gear units
- Circulating systems
- Morgan No-Twist® Oil 100 can also be used in hydraulic systems employing gear, vane, radial and axial piston pumps where high viscosity anti-wear hydraulic fluids are required.
- Certain compressors and vacuum pumps handling air and inert gases provided the discharge temperatures do not exceed 150°C. Not suitable for breathing air compressors

Properties and Specifications

Property	100	320	460
Grade		ISO 320	ISO 460
Copper Strip Corrosion, 3 h, 100 C, Rating, ASTM D130	1A	1A	1A
Demulsibility, Total Free Water, Non-EP Oils, ml, ASTM D2711	39	39	35
Density @ 15 C, kg/l, ASTM D1298	0.88	0.89	0.90
Emulsion, Time to 37 mL Water, 54 C, min, ASTM D1401	15		
Emulsion, Time to 40/37/3, 82 C, min, ASTM D1401		20	25
FZG Scuffing, Fail Load Stage, A/8.3/90, ISO 14635-1	12	12	12
Flash Point, Cleveland Open Cup, °C, ASTM D92	264	288	286
Foam, Sequence I, Stability, ml, ASTM D892	0	0	0
Foam, Sequence I, Tendency, ml, ASTM D892	10	10	5
Foam, Sequence II, Stability, ml, ASTM D892	0	0	0
Foam, Sequence II, Tendency, ml, ASTM D892	0	0	0
Foam, Sequence III, Stability, ml, ASTM D892	0	0	0
Foam, Sequence III, Tendency, ml, ASTM D892	0	0	0
Kinematic Viscosity @ 100 C, mm2/s, ASTM D445	10.7	24.4	29.4
Kinematic Viscosity @ 40 C, mm2/s, ASTM D445	89	309	453
Pour Point, °C, ASTM D97	-24	-12	-12
Rust Characteristics, Procedure A, ASTM D665	PASS	PASS	PASS
Rust Characteristics, Procedure B, ASTM D665	PASS	PASS	PASS
Viscosity Index, ASTM D2270	99	96	95

Health and Safety

Health and Safety recommendations for this product can be found on the Material Safety Data Sheet (MSDS) @ http://www.msds.exxonmobil.com/psims/psims.aspx

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Typical Properties are typical of those obtained with normal production tolerance and do not constitute a specification. Variations that do not affect product performance are to be expected during normal manufacture and at different blending locations. The information contained herein is subject to change without notice. All products may not be available locally. For more information, contact your local ExxonMobil contact or visit www.exxonmobil.com

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