



PRODUCT DATA SHEET



EKO CIRCULATING RM OIL

Mineral lubricants for heavy duty circulating oil lubrication systems

DESCRIPTION

The EKO CIRCULATING RM OIL series includes high performance mineral oils designed to lubricate no twist rod mills in the steel industry. The special ash-free additive package the EKO CIRCULATING RM OIL lubricants contain combines excellent lubricant - water separation characteristics with excellent wear protection (FZG failure load > 12), that makes the lubricants of the series the appropriate choice for industrial circulating systems that lubricate bearings and gears.

EKO CIRCULATING RM OIL 100 complies with Morgan No-Twist Rod Mill and Danieli 0.000.001 Type 21, so it is suitable for lubricating the high-speed and no twist rod mills of Morgan Construction and the rod mills of Danieli.

SPECIFICATIONS

Morgan No-Twist Rod Mill Lubricant, Danieli 0.000.001 Type 21	EKO CIRCULATING RM OIL 100
DIN 51524 part 1 (HL), DIN 51517 part 2 (CL), AFNOR NF E 48-603 (HL), ISO 1158 HL, Schuler Pressem GmbH Hydraulic Oils DT55005.	EKO CIRCULATING RM OIL 100, 150, 220, 320, 460

APPLICATIONS

- Circulating oil systems that lubricate bearings and gears.
- The high-speed and no twist rod mills rollers of Morgan Construction, and the rod mills of Danieli and of other companies.
- Gear units operating in moderate duty applications in industry and shipping.
- Hydraulic systems with pumps and gears, which require high viscosity hydraulic lubricants with anti-wear additives.
- Industrial lubrication systems that require lubricants with mild EP additives to protect against wear.



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ADVANTAGES

- Excellent protection against wear on gears and bearings as described by the results of FZG A / 8.3 / 90, Brugger test, and FE-8 bearing test in the lubricants of the series.
- Excellent demulsification characteristics, resulting in trouble-free operation and reduced downtime.
- Excellent air release characteristics, resulting in the protection of pumps, gears and bearings against air trapping.
- Excellent protection against corrosion and rust, resulting in longer equipment life and lower maintenance costs.
- High resistance to oxidation and thermal degradation, which helps increase the life of both lubricant and equipment.
- Compatibility with all commonly used seal materials.

TYPICAL CHARACTERISTICS

Properties	Methods	Units	EKO CIRCULATING RM OIL 100	EKO CIRCULATING RM OIL 150	EKO CIRCULATING RM OIL 220
ISO Viscosity Grade	-	-	100	150	220
Density at 15°C	ASTM D 4052	g/ml	0.88	0.89	0.90
Kinematic viscosity at 40°C	ASTM D 445	cSt	100	150	220
Viscosity Index (VI)	ASTM D 2270	-	100	97	96
Pour Point	ASTM D 5950	°C	-24	-24	-24
Flash Point	ASTM D 92	°C	250	258	264
Water separability, time to 40-40-0 (ml)	ASTM D1401	min	10	10	20
Copper corrosion	ASTM D130	-	1b	1b	1b
Rust-preventing characteristics	ASTM D665 A/B	-	Pass/Pass	Pass/Pass	Pass/Pass
Foaming characteristics, Tension/Stability, Seq. I,II,III	ASTM D 892	ml	0/0	0/0	0/0
FZG Gear Scuffing test - A/8.3/90	ISO 14635-1.	Failure Load Stage	12+	12+	12+
Oxidation Stability	ISO 4263-1	hours	3900	>3500	>3500



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TYPICAL CHARACTERISTICS

Properties	Methods	Units	EKO CIRCULATING RM OIL 320	EKO CIRCULATING RM OIL 460
ISO Viscosity Grade	-	-	320	460
Density at 15°C	ASTM D 4052	g/ml	0.91	0.91
Kinematic viscosity at 40°C	ASTM D 445	cSt	320	460
Viscosity Index (VI)	ASTM D 2270	-	96	95
Pour Point	ASTM D 5950	°C	-21	-21
Flash Point	ASTM D 92	°C	270	274
Water separability, time to 40-40-0 (ml)	ASTM D 1401	min	20	20
Copper corrosion	ASTM D 130	-	1b	1b
Rust-preventing characteristics	ASTM D 665 A/B	-	Pass/Pass	Pass/Pass
Foaming characteristics, Tension/Stability, Seq. I,II,III	ASTM D 892	ml	0/0	0/0
FZG Gear Scuffing test - A/8.3/90	ISO 14635-1	Failure Load Stage	12+	12+
Oxidation Stability	ISO 4263-1	hours	>3500	>3500

HEALTH AND SAFETY

Protect the environment while disposing of used product. Used lubricants should be collected at specific points to ensure they do not pollute the environment. Do not mix with solvents, brake fluids, antifreeze fluids and water, to allow for proper handling.

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This data sheet provides basic information on the product as at the date of drafting. For further information regarding applications, please contact EKO ABEE Technical Support, tel. +30 210 5509 511 and +30 210 7725 418. Advice on safe handling is provided in the Safety Data Sheet.