MAK FILMBEAR

High performance bearing oils for steel mills

MAK Filmbear oils are a range of high quality heavy duty bearing oils. They have been formulated from highly refined, superior hydrotreated base oils and fortified with selected ash-less type additives. The oils have high viscosity index, very low sulphur content and inherent resistance to oxidation and thermal degradation. They have unique demulsibility and anti-foaming characteristics. They have very high film strength providing extra rust protection and minimising wear in roll-neck bearings of steel mills.

Grades – MAK Filmbear oils are available in the following ISO VG grades – **46, 68, 100, 150** and **220.**

Applications:
MAK Filmbear oils are especially developed for oil film bearings in steel mills where the conditions are very severe due to high temperature, heavier loads coupled with proximity to water and ingress of foreign materials. e.g., in the Plate Mill, Wire Rod Mill, Merchant Mill, Blooming and Billet Mill, Rail and Structural Mill etc.

Performance/ Benefits:
High Viscosity Index – maintains viscosity under widely varying operating conditions and helps the equipment to perform to its design standards.

Excellent Wear Protection – excellent protection to the pump, valve and other system components. Operates on a wide range of load conditions – moderate to severe duty high load and temperatures.

High Oxidation and Thermal Stability – outstanding resistance to oxidation and thermal break down. Resists sludge and deposit formation. Has the capability to work under varied operating temperatures. Ensures reliability, longer operating life and less maintenance.

Low Foaming Tendency – helps maintaining continuous strong oil film between moving parts and provides protection against scuffing of machine components.

Superior Rust & Corrosion Protection – prevents rusting and corrosion. Rapidly separates water. Fewer unscheduled stoppages and lower maintenance costs.

Specification:
- IPSS: 1-09-001-097

Storage & Handling:
The product should be stored inside. Keep it properly sealed to avoid contamination. Avoid freezing. Shelf life is 3 yrs. under protected storage conditions.

Health & Safety:
These oils are unlikely to be hazardous when properly used in recommended applications. Contamination of the coolant from other oils, greases, chemicals, dirty water etc. can occur during the use. It should be avoided. Regular monitoring of the in-use product is recommended.

Typical Physico-Chemical Data: MAK Filmbear Oils

Characteristics	Method	46	68	100	150	220
Appearance	Visual	Clear & Bright	Clear & Bright	Clear & Bright	Clear & Bright	Clear & Bright
Density @15^{O}C, g/cc	ASTM D1298	0.8582	0.8614	0.8650	0.8722	0.8892
Kinematic Viscosity @40^{O}C, cSt	ASTM D445	46.2	68.3	100.6	150.8	220.3
Kinematic Viscosity @100^{O}C, cSt	ASTM D445	7.1	9.1	11.6	15.0	19.2
Viscosity Index	ASTM D2270	112	108	103	99	98
Foaming Characteristics, ml/ml, for sequences I, II, III	ASTM D892	NIL/ NIL	NIL/ NIL	NIL/ NIL	NIL/ NIL	NIL/ NIL
Pour Point, ^{O}C	ASTM D97	-15	-15	-12	-9	-9
Flash Point, COC, ^{O}C	ASTM D92	216	230	236	240	250
Copper Corrosion, 100^{O}C, 3 hrs.	ASTM D130	1a	1a	1a	1a	1a
Rust test	ASTM D665	Pass	Pass	Pass	Pass	Pass

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