MAK CABOL

High quality bearing oils for general applications

MAK Cabol oils is a range of high quality heavy duty circulating oils designed for general applications. They are formulated with high quality straight mineral base oils. The oils have low sulphur content and inherent thermal stability and resistance to oxidation. They have high film strength providing extra rust protection. MAK Cabol oils are compatible with the seal materials and paints normally specified for use with mineral oils.

Grades – MAK Cabol oils are available in the following ISO VG grades – **15, 22, 32, 46, 68** and **100.**

Applications:
MAK Cabol Oils are recommended for general purpose applications of all types of industrial machineries using once through lubrication where additised oil is not required. These are also recommended for use in lubricating system of bearings of machine tools and other machine components which are lubricated by a thin film of oil. They can also be used for applications flushing, slides and guide of machines etc. MAK Cabol 32 is suitable for flushing of automotive and industrial machineries.

Performance/ Benefits:
Good Viscosity-Temperature Characteristics – maintains viscosity under widely varying operating conditions and helps the equipment to perform to its design standards.

High Oxidation and Thermal Stability – very high resistance to oxidation, chemical 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.

Strong Rust & Corrosion Protection – prevents rusting and corrosion. Creates a strong thin film. Rapidly separates water. Fewer unscheduled stoppages and lower maintenance costs.

Specification:
- MAK Cabol 15 – Proprietary Grade
- MAK Cabol 22 – IS:493 – 1981 (Part II) (Reaffirmed 2014)
- MAK Cabol 32, 46, 68 & 100 – IS:493 – 1981 (Part I) (Reaffirmed 2014)

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 Cabol Oils

Characteristics	Method	15	22	32	46	68	100
Appearance	Visual	Clear & Bright	Clear & Bright	Clear & Bright	Clear & Bright	Clear & Bright	Clear & Bright
Density @15^{O}C, g/cc	ASTM D1298	0.8651	0.8664	0.8819	0.8827	0.8835	0.8876
Kinematic Viscosity @40^{O}C, cSt	ASTM D445	15.1	22.9	32.3	46.2	68.4	100.7
Kinematic Viscosity @100^{O}C, cSt	ASTM D445	3.44	4.40	5.36	6.74	8.70	11.30
Viscosity Index	ASTM D2270	102	100	98	98	98	98
Foaming Characteristics (Stability), ml/ml, for sequences I, II, III	ASTM D892	NIL	NIL	NIL	NIL	NIL	NIL
Pour Point, ^{O}C	ASTM D97	-6	-6	-3	-3	-3	-3
Flash Point, COC, ^{O}C	ASTM D92	166	180	190	196	200	210
Copper Corrosion, 100^{O}C, 3 hrs.	ASTM D130	1a	1a	1a	1a	1a	1a

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