MAK METAMOL

Superior quality machine tool slideway lubricating oils

MAK Metamol grades are high quality lubricating oils developed from high viscosity index base oil blended with carefully selected additive package. The high quality base stock combined with the additive package imparts the frictional characteristics necessary to prevent stick-slip and jerky motion. These oils have very high resistance to oxidation in order to enhance the operating life. They also offer excellent oiliness, wear resistance and non-drip characteristics. MAK Metamol oils are compatible with the paints normally specified for use in industrial machine tool slide way systems with mineral oils.

Grades: MAK Metamol range is available in the following ISO VG grades – **32, 68, 100** and **220**.

Applications:
MAK Metamol grades are recommended for lubrication of Machine tool slideways, tables and feed mechanisms for both horizontal and vertical guide ways. MAK Metamol 32, 68 and 100 are generally recommended for horizontal slideway lubrication and MAK Metamol 220 is suitable for vertical slides owing to its higher viscosity.

Performance/ Benefits:
Superior Oxidation Stability – outstanding resistance to the effects of oxidising agents. Resists sludge, deposit formation and increase in viscosity. Ensures reliability, longer operating life and less maintenance.

Excellent Tackiness Property – offers excellent adhesive properties for smooth operation in stick-slip region. Its non-drip additives prevent its leakage into the cutting fluid sump or dripping on the work materials. Prevents washing away by metal working fluids. Increases machining precision and reduces consumption.

Very Good Oiliness Property – allows smooth operation/ movement on the slideway. Maintains system efficiency.

Excellent Wear Protection – excellent protection to the slideway and other system components. Operates on a wide range of load conditions.

Low Volatility – excellent resistance to evaporation even at higher temperatures.

Rapid Separation of Coolant – allows better separation between the coolant and the slideway oil for easy removal of tramp oil.

Good Anti-Corrosion & Anti-Rust Property – provides protection to all components and slides from rusting and corrosion.

Specification:
- Proprietary grade

Storage & Handling:
The product should be stored inside. Keep it properly sealed to avoid contamination. Avoid freezing. Shelf life is 5 yrs. under protected storage conditions.

Health & Safety:
They are unlikely to be hazardous when properly used in recommended applications. Contamination of the oil 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.

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Typical Physico-Chemical Data: MAK Metamol

Characteristics	Method	32	68	100	220
Colour	Visual	Brown	Brown	Brown	Brown
Appearance	Visual	Clear & Bright	Clear & Bright	Clear & Bright	Clear & Bright
Density, g/cc @15^{O}C	ASTM D1298	0.878	0.885	0.893	0.910
Kinematic Viscosity @40^{O}C, cSt	ASTM D445	32.5	68.8	100.2	220.3
Kinematic Viscosity @100^{O}C, cSt	ASTM D445	5.5	9.0	11.15	18.9
Viscosity Index	ASTM D2270	105	105	96	96
Flash Point, COC, ^{O}C	ASTM D92	222	236	240	250
Pour Point, ^{O}C	ASTM D97	-9	-9	-6	-6
Copper Corrosion, 100^{O}C, 3 hrs.	ASTM D130	1b	1b	1b	1b
Foaming Characteristics/ Stability, ml Sequence I/ II/ III	ASTM D892	Nil	Nil	Nil	Nil

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