

MAK UNIVOL

High quality oils for general applications

MAK Univol oils are a range of high quality heavy duty circulating oils designed for general applications. They are formulated with high quality severely hydroprocessed Group II plus mineral base oils. The oils have high viscosity index, very low sulphur content and inherent resistance to oxidation. They have high film strength providing extra rust protection and eliminating scuffing and scoring of the mildly loaded machine components. It has a superior water separating ability. MAK Univol oils are compatible with the seal materials and paints normally specified for use with mineral oils.

Grades – MAK Univol oils are available in the following ISO VG grades – **32, 46, 68, 100, 150, 220, 320** and **460**.

Applications:

MAK Univol 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 machine tools and other machine components which are lubricated by a thin film of oil. They can also be used for applications like mildly loaded bearings, slides and guide of machines, fluid sealing medium etc. MAK Univol 32 is suitable for flushing of automotive and industrial machineries.

Performance/ Benefits:

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

Typical Physico-Chemical Data: MAK Univol Oils

Characteristics	Method	32	46	68	100	150	220	320	460
Appearance	Visual	Clear & Bright	Clear & Bright	Clear & Bright	Clear & Bright	Clear & Bright	Clear & Bright	Clear & Bright	Clear & Bright
Kinematic Viscosity @40°C, cSt	ASTM D445	32.3	46.9	68.5	100.6	150.4	220.1	320.7	460.5
Kinematic Viscosity @100°C, cSt	ASTM D445	5.66	7.26	9.3	12.1	15.8	20.1	24.7	30.7
Viscosity Index	ASTM D2270	115	115	113	111	108	105	99	97
Foaming Characteristics, ml/ml, for sequences I, II, III	ASTM D892	30/ NIL	30/ NIL	30/ NIL	20/ NIL	20/ NIL	20/ NIL	20/ NIL	20/ NIL
Pour Point, °C	ASTM D97	-12	-9	-9	-6	-6	-6	-6	-6
Flash Point, COC, °C	ASTM D92	208	216	230	236	240	250	256	270
Copper Corrosion, 100°C, 3 hrs.	ASTM D130	1a	1a	1a	1a	1a	1a	1a	1a

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.

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

Specification:

- 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.