



MAK HYDROVIS POWER

Premium quality high viscosity index hydraulic fluid with energy efficiency potential

MAK Hydrovis Power oils are a group of high performance premium quality hydraulic oils. It is blended from severely hydrotreated, high viscosity index Group II plus base oils with advanced additive system. This oil is designed with excellent viscosity control to operate over a wide range of working conditions including severe mechanical stress and wide temperature range. The advanced shear-stable viscosity index improver ensures constant viscosity and this produces a noticeable improvement in the efficiency of a hydraulic system. Formulated for excellent water separation, exceptional hydrolytic stability, anti-foam characteristics and cleanliness they allow efficient operation of the system. It is also designed to help increasing equipment service life and lowering maintenance cost through providing superior moisture handling, excellent wear protection and long oil life capability. MAK Hydrovis Power oils are compatible with seal materials and paints normally specified for use in hydraulic systems with mineral oils.

Grades: MAK Hydrovis Power range is available in the following ISO VG grades – **32** and **46**

Applications:

MAK Hydrovis Power oils are recommended for all types of hydraulic and fluid power transmission systems operating under high pressure and also in exposed environments where wide variations of temperature takes place. They are specially developed for use in mobile equipment such as construction equipment, concrete machinery, mining equipment, hydraulic excavators, hydraulic cranes, forestry equipment and injection moulding machines.

Performance/ Benefits:

Energy Efficiency Potential – reduced friction and greater temperature stability offer better cold starts and hot running.

- **Cold Start** – less power is required than with conventional fluids since it is designed to provide lower viscosity at the lower start-up temperature. As the friction is lowered so is the fuel consumption.
- **Running Hot** – vane pumps or piston pumps are inefficient while handling hot hydraulic fluid. Hot fluid

creates internal leakage and reduces pump efficiency. This oil is designed to resist internal leakage and reduce heat build-up. Due to the constant viscosity, it improves volumetric and hydro-mechanical efficiency of the pumps and hence offers reduction in energy consumption.

Excellent Thermal Stability – provides resistance to thermal break down and offers capability to work under varied ambient and operating temperatures with optimum efficiency.

Outstanding Oxidation Stability – outstanding resistance to the effects of oxidising agents. Resists sludge and deposit formation. Minimises filter choking. Ensures longer operating life, less maintenance and reduction in operating cost.

Superior Hydrolytic Stability – resists water absorption and the chemical decomposition of the oil in the presence of water. Protects from acid corrosion, rusting and allows longer oil life.

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

Excellent Thermal Stability – provides resistance to thermal break down and capability to work under varied ambient and operating temperatures to offer optimum life and performance.

Resistance to Foaming – allows precision control, high pump pressures and efficient power transfer. Maintains system efficiency.

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

Added Benefits – offers faster and smoother response of the hydraulic systems. Quicker start up and less sluggishness ensure easy flow to lubricated areas during cold start.



Specification:

- Exceeds DIN 51524 Part 3 HVLP type
- Denison HF-0

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.

Typical Physico-Chemical Data: MAK Hydrovis Power

Characteristics	Method	32	46
Appearance	Visual	Clear	Clear
Density, g/cc @15°C	ASTM D1298	0.845	0.850
Kinematic Viscosity @40°C, cSt	ASTM D445	32.2	46.5
Kinematic Viscosity @100°C, cSt	ASTM D445	6.63	8.7
Viscosity Index	ASTM D2270	168	168
Flash Point, COC, °C	ASTM D92	226	240
Pour Point, °C	ASTM D97	-33	-33
Copper Corrosion, 100°C, 3 hrs.	ASTM D130	1a	1a
Foaming Characteristics/ Stability, ml Sequence I, II & III	ASTM D892	Nil	Nil
FZG Rating, FLS	ASTM D5182	11	11
Rust Prevention Characteristics	ASTM D665	Pass	Pass
Demulsibility @54°C, (ml-mins)	ASTM D1401	40-40-0 (15)	40-40-0 (20)



Viscosity - Temperature Chart for MAK Hydrovis Power

