

# **MAK HYDROL HLP**

## **Description**

MAK Hydrol HLP grades are premium grade extra heavy duty oils blended from Hydro processed Group II plus base oil. They are fortified with very carefully selected anti-wear additives which make them suitable for applications involving higher and lower load conditions. They possess excellent compatibility with seals which prolongs seal life. They also show exceptional hydrolytic stability and demulsibility and resist any deterioration due to water contamination.

## **Application**

These are recommended for hydraulic systems and a wide variety of circulation systems of industrial and automotive equipments. These are also used in General manufacturing, Metal and Power equipments. They also find application in mining and construction equipments.

MAK Hydrol HLP grades are also recommended for the lubrication for rotors, bearings and gears in rotary compressors like screw and vane type rotary compressors.

This grade can also be supplied in Super Clean HDPE Barrels (Typically NAS 7 at point of filling).

## **Performance Level**

- 11th FLS of FZG – Niemann EP test
- IS 11656: 1986 [Reaffirmed March, 2002]
- DIN 51 524 Part II HL P Type
- Denison HF-0 & HF-2
- Eaton Vickers I-286-S & M-2950-S
- Eaton Vickers 35VQ25 Pump Test
- US Steel 127
- Cincinnati Milacron P-70

## Features and Benefits

### Outstanding Oxidation and Thermal Stability

Minimize deposits  
Reduces fouling, filter blockages or valve sticking  
Longer oil life  
Improved reliability of system, less maintenance and extended oil drain intervals.  
Improved filter life

### Excellent Demulsibility & Hydrolytic stability

Good demulsibility property avoids absorption of water in oil and thus enhancing fluid life.  
Good hydrolytic stability helps prevent oil degradation from water  
Less potential for emulsion formation

### Protection against wear

Prolongs their life and avoids unexpected breakdowns  
Higher FZG Rating makes it suitable for use at higher load conditions.  
Reduces overall maintenance costs

### Protects against rust & corrosion

Prevents internal hydraulic system corrosion  
Improves component life

### Excellent Seal Compatibility

Prolongs seal life and reduces oil leakages  
Reduced maintenance

## Technical Specifications

Characteristics	ASTM	MAK HYDROL HLP				
		32	46	68	100	150
Appearance	--	Clear fluid	Clear fluid	Clear fluid	Clear fluid	Clear fluid
Density at 15° C	D1298	0.8513	0.8561	0.8598	0.8644	0.8705
K.V at 40° C, cSt	D445	32.6	46.1	68.3	100.5	150.7
Viscosity Index	D2270	110	110	110	106	105
Pour Point, °C	D97	-21	-21	-18	-18	-18
Flash Point, (COC), °C	D92	210	244	248	256	260
Copper Strip Corrosion Test at 100°C for 3 hrs.	D130	1a	1a	1a	1a	1a
Foaming Characteristics / Stability	D892					
a) Sequence I		Nil	Nil	Nil	Nil	Nil
b) Sequence II		Nil	Nil	Nil	Nil	Nil
c) Sequence III		Nil	Nil	Nil	Nil	Nil
FZG Rating	D5182	11+	11+	11+	11+	11+

All the mentioned values are typical which may vary from batch to batch.

## Storage and Handling

- Indoor Storage is always preferable
- Barrels should be kept horizontally with bunk position at 3 O'clock 9 O'clock position
- Barrels should be kept away from dusty or heated areas.
- During handling any contact with dust must be avoided

## Health and Safety

These oils are not hazardous under normal conditions of use. For further guidance appropriate Material Safety Data Sheet may be referred.

## Advice

For any further advice on applications or otherwise, please contact the nearest Bharat Petroleum territory office or Technical Services department at the address given below.

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