

Product Data Sheet

MAK HYDROL HLP NZ

ISO VG: 32, 46, 68 & 100

DESCRIPTION

These are high performance hydraulic oils blended from solvent refined high viscosity index mineral oil and zinc free ash-less type of additives.

PERFORMANCE BENEFITS

- Zinc free ash-less type
- Designed to withstand heavy load and other extreme conditions caused by high speed and high temperature
- Superior wear protection quality of oil can be evidenced from its exceptionally good FZG rating (12th stage pass)

APPLICATIONS

These are ideally suited for sophisticated electronically and numerically controlled hydraulic system where Zinc free hydraulic oils are required.

PERFORMANCE LEVEL

- IS 10522 : 1983 [Reaffirmed Nov., 1998]
- IS 11656 : 1986 [Reaffirmed March, 2002]
- DIN 51 524 Part 2 – HLP Type
- Denison HF-0 & HF-2
- Vickers 1-286-S
- US Steel 127
- Cincinnati Milacron P-70

Our grades meet above specification for the respective viscosity grades.

Characteristics	IS 1448	Typical Figures			
		32	46	68	100
Appearance	--	Clear fluid	Clear fluid	Clear fluid	Clear fluid
Density at 15° C	P:16	0.8514	0.8561	0.8604	0.8652
K.V at 40° C, cSt	P:25	32.6	46.8	68.9	100.4
Viscosity Index	P:56	104	104	104	103
Pour Point, °C	P:10	-21	-18	-18	-18
Flash Point, (COC), °C	P:69	220	238	244	256
Copper Strip Corrosion Test at 100°C for 3 hrs.	P:15	1a	1a	1a	1a
Foaming Characteristics/Stability	P:67	Nil	Nil	Nil	Nil
a) Sequence I					
b) Sequence II					
c) Sequence III	Nil	Nil	Nil	Nil	
Zinc content	--	Nil	Nil	Nil	Nil

Health and Safety

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

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Technical Services

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