

Product Data Sheet

MAK HYDROL

ISO VG: 15, 22, 32, 46, 68, 100, 150, 220, 320 & 460 Non ISO VG: 12, 37, 57, 81, 121 & 176

DESCRIPTION
 These are specially designed oils for hydraulic transmission and circulating systems.

PERFORMANCE BENEFITS

- Exhibits good oxidation, anti-rust, anti-wear and anti-foam properties
- Have excellent compatibility with the seals

APPLICATIONS
 These are recommended for hydraulic systems and a wide variety of circulation systems of industrial and automotive equipments.

PERFORMANCE LEVEL

- IS 3098 : 1983 [Reaffirmed Nov., 1998]
- IPSS : 1-09-022
- IS 10522 : 1983 [Reaffirmed Nov., 1998]
- Vickers V-104C Vane pump test
- DIN 51 524 Part 1 HL Type

Our grades meet above specification for the respective viscosity grades.

Characteristics	IS 1448	Typical Figures			
		12	15	22	32
Appearance	--	Clear fluid	Clear fluid	Clear fluid	Clear fluid
Density at 15° C	P:16	0.849	0.849	0.850	0.852
K.V at 40° C, cSt	P:25	12.8	15.3	22.6	32.6
Viscosity Index	P:56	103	103	102	101
Pour Point, °C	P:10	-15	-12	-12	-12
Flash Point, (COC), °C	P:69	180	186	200	220
Copper Strip Corrosion Test at 100°C for 3 hrs.	P:15	1	1	1	1
Foaming Characteristics/Stability	P:67	Nil	Nil	Nil	Nil
a) Sequence I					
b) Sequence II					
c) Sequence III		Nil	Nil	Nil	Nil

Characteristics	IS 1448	Typical Figures			
		37	46	57	68
Appearance	--	Clear fluid	Clear fluid	Clear fluid	Clear fluid
Density at 15° C	P:16	0.852	0.855	0.857	0.860
K.V at 40° C, cSt	P:25	37.3	46.7	57.2	68.1
Viscosity Index	P:56	100	100	100	99
Pour Point, °C	P:10	-12	-12	-12	-12
Flash Point, (COC), °C	P:69	224	226	234	238
Copper Strip Corrosion Test at 100°C for 3 hrs.	P:15	1	1	1	1
Foaming Characteristics/Stability	P:67	Nil	Nil	Nil	Nil
a) Sequence I					
b) Sequence II					
c) Sequence III		Nil	Nil	Nil	Nil

Product Data Sheet

Characteristics	IS 1448	Typical Figures			
		81	100	121	150
Appearance	--	Clear fluid	Clear fluid	Clear fluid	Clear fluid
Density at 15° C	P:16	0.862	0.865	0.868	0.874
K.V at 40° C, cSt	P:25	81.4	100.2	121.2	150.5
Viscosity Index	P:56	98	96	96	95
Pour Point, °C	P:10	-12	-12	-9	-9
Flash Point, (COC), °C	P:69	246	248	252	256
Copper Strip Corrosion Test at 100°C for 3 hrs.	P:15	1	1	1	1
Foaming Characteristics/Stability	P:67				
a) Sequence I		Nil	Nil	Nil	Nil
b) Sequence II		Nil	Nil	Nil	Nil
c) Sequence III		Nil	Nil	Nil	Nil

Characteristics	IS 1448	Typical Figures			
		176	220	320	460
Appearance	--	Clear fluid	Clear fluid	Clear fluid	Clear fluid
Density at 15° C	P:16	0.880	0.886	0.895	0.904
K.V at 40° C, cSt	P:25	176.5	220.1	320.4	460.6
Viscosity Index	P:56	94	94	92	92
Pour Point, °C	P:10	-9	-6	-6	-6
Flash Point, (COC), °C	P:69	258	262	268	272
Copper Strip Corrosion Test at 100°C for 3 hrs.	P:15	1	1	1	1
Foaming Characteristics/Stability	P:67				
a) Sequence I		Nil	Nil	Nil	Nil
b) Sequence II		Nil	Nil	Nil	Nil
c) Sequence III		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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