

LUBRICANTS AND RELATED PRODUCTS FOR INDUSTRIAL USE

INA Hidraol HDS

General Description - Application

INA Hidraol HDS are range of high quality mineral hydraulic oils, with very good rheological properties especially low temperatures viscosity and high viscosity index. The oil contain additives to improve antiwear and load-carrying properties, corrosion resistance, oxidation stability and foaming properties. INA Hidraol HDS show improved hydrolytic, thermal and oxidation stability as well as filterability. INA Hidraol HDS offer good wear protection being compatible with silver plated and yellow metal alloy bearings and reduce deposits and filter blocking thus prolonging pumps service life. Specially developed for application at extremely low temperatures or where marked temperatures fluctuations occur such as transporting and lifting devices, for outdoor hydraulics, mobile equipment. Specially recommended for very sensitive hydraulic systems operating at low temperatures.

Performance Level - Specifications

ISO 6743-4 L - HV

ISO 11158 HV

Parker Haniffin (Denison) HF-0 /HF-2

DIN 51524/3 HVLP

Sperry Vickers M-2950-S

INA N 22-175 TIP 1

Properties	INA Hidraol HDS					Method
ISO - L- HV	15	22	32	46	68	ISO 3448
Density at 15 °C, g/cm ³	0,886	0,889	0,881	0,876	0,880	ISO 3675
Kinematic Viscosity, mm ² /s						
- at -30 °C	2000	3000	6000	-	-	ISO 3104
- at -20 °C	500	1000	1700	3900	-	
- at -10 °C	220	400	660	1200	2000	
- at 0 °C	95	180	300	500	900	
- at 40 °C	15	22	32	46	68	
- at 100 °C	3,7	4,9	6,4	8,2	10,2	
Viscosity Index	133	152	155	153	135	ISO 2909
Flash Point, (COC), °C	140	155	175	180	180	ISO 2592
Pour Point, °C	<-42	-42	-38	-33	-30	ISO 3016
Corrosion (Cu, 100 °C, 3 h)	1a					ISO 2160
Water separation:						
- time to 3 ml emulsion at 54 °C, min	20					ISO 6614
Foam:						
- at 24 °C , ml/ml	50/0					ISO 6247
- at 93,5 °C , ml/ml	30/0					
- at 24 °C, ml/ml	10/0					
Rust Prevention	no rust					ISO 7120/A
Shear stability, 250 Cycles:						
- viscosity loss 40 °C, %	6,0					CEC L-14-A-88
FZG load stage fail	-	10				DIN 51354

The above figures are typical of those obtained with normal production tolerance and do not constitute a specification.