

Hydraulic oils

HYDROMIL SUPER POLAR L-HV

Hydraulic oils Hydromil Super Polar L-HV 15; 22; 32 are designed for application in heavy loaded drive and hydraulic control systems operating at extremely low temperatures. Hydromil Super Polar L-HV 15; 22; 32 oils are formulated upon specially modified, deeply refined, dewaxed and hydrotreated oils received from crude oil refining. The oils contain a properly selected package of ash-less and zinc-free viscosity/temperature, anticorrosion, anti-oxidation and lubrication additives as well as de-emulsifying and antifoam attributes.

Hydromil Super Polar L-HV 15; 22; 32 oils are perfect for application in machines and devices working at temperatures below -30°C , where machine cold start is unavoidable. Extremely high oil viscosity indexes guarantee the correctness of oil exploitation for the following temperature ranges of oil work:

- Hydromil Super Polar L-HV 15 – for the range from -40°C to $+50^{\circ}\text{C}$,
 - Hydromil Super Polar L-HV 22 – for the range from -35°C to $+60^{\circ}\text{C}$,
 - Hydromil Super Polar L-HV 32 – for the range from -30°C to $+80^{\circ}\text{C}$,
- in all types of hydraulic and circulation systems, where a very high viscosity index and low-temperature properties are required as critical.

Characteristics:

The oil formula guarantees:

- optimum protection of the lubricated elements' surface,
- high antifoam properties,
- very good air release,
- excellent de-emulsifying qualities,
- very high hydrolytic stability,
- super-low dependence of oil viscosity on working temperature,
- viscosity resistance to coagulation during work,
- high filterability,
- high resistance to exploitation sludge formation,
- very high cleanness of the lubrication system,
- anti-wear protection and a long life of the lubrication system elements.

The oils are designed for lubrication of:

- hydraulic power transmission and control systems,
- gears, hydraulic transmissions,
- control gears,
- systems of general bearing lubrication,
- gear pumps up to 25MPa,
- piston pumps up to 35MPa,

used in conditions of changing working temperatures, particularly when extremely low temperatures and changing thermal loads occur.

№	Requirements	Research methods by	Unit	Value		
				Hydromil Super Polar L-HV 15	Hydromil Super Polar L-HV 22	Hydromil Super Polar L-HV 32
1.	Kinematic viscosity: - at 40°C, - at -20°C, - at -30°C, - at -35°C	ASTM D-445	mm ² /s	15,0 350 2000	22,0 700 2000	22,00 1000
2.	Pour point	ASTM D-5950	°C	-48	-45	-42
3.	Air release ability 50°C	ASTM D 892	min	5	5	5
4.	De-emulsifying properties	ASTM D1401	min	12	12	12
5.	Viscosity index	ASTM D-2270		200	200	200
10.	Foaming resistance: -susceptibility/ stability: at 25 °C, at 95 °C, from 25 °C to 95 °C,	ASTM D-892	ml	<100/0 <100/0 <100/0	<100/0 <100/0 <100/0	<100/0 <100/0 <100/0

The above given data are typical values for a production batch, they are not included in the technical specification, and they are subject to change due to continual product research and development.

Application recommendations:

Hydromil Super Polar L-HV 15; 22; 32 oils can be applied in hydraulic systems wherever zinc-free oils with extremely high viscosity and temperature qualities as well as anti-wear properties are required according to their viscosity grade. Hydromil Super Polar L-HV 15; 22; 32 oils meet the quality requirements for hydraulic oils in accordance with ISO- L-HV; DIN 51524 part 3 and can be used in systems where the OEM recommends ISO-L-HV classical grade and VG 15-32 viscosity grade for Hydromil Super Polar L-HV 15, VG 22-32 for Hydromil Super Polar L-HV 22 and VG 32-46 for Hydromil Super Polar L-HV 32.

Specifications, classifications:

ISO VG 15, 22, 32

DIN HVLP (DIN 51524cz3),

ISO-L-HV,

Approvals:

Meets the requirements of HF-0; HF-1; HF-2 Denison-Parker Hydraulic, Vickers, Bosch-Rexroth

Packaging:

26kg, 180kg, 1 ton

Storage:

The products should be stored under a roof. If they are stored in the open air where they can be exposed to atmospheric conditions – rains, they should be placed in a horizontal position in order to avoid inrush of water to a container and to prevent label damaging; they should be covered with tarpaulin.

The products should not be stored at the temperature above 60°C and in the places where solar radiation is very strong or – temperatures very low. The expiry date is not less than 3 years if the storage conditions are satisfied.

Health, industrial safety and the environment:

Information concerning safety is included in the product Safety Sheet. It contains detailed information on possible threats, warnings, first aid as well as the impact on the environment and ways of utilization of the used products.

LOTOS Oil SA and the cooperating companies do not take responsibility for misuse of the product or – the use with the violation of the precautions given.

Before using the product for other than recommended purposes, seek advice in the local LOTOS Oil SA office.

The information provided in this data sheet is not intended to constitute an offer within the meaning of the Act of 23rd April 1964 - Civil Code. LOTOS Oil S.A. bears no responsibility for whatever effects of use (particularly in trade and investment decision-making) of information contained herein. Any data contained in the MSDS are typical process tolerance values and they are subject to change due to continual product research and development. Information provided in this document may undergo changes. LOTOS Oil S.A. is not responsible for the product availability.

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