



**Product Name:** HYDRÖI Hydraulic Oil HLP-D

**ISO Classification:** HLP-D

**Viscosity Grades:** ISO VG 22, 32, 46, 68, 100, 150

**Quality:** Mineral

**Recommended for:** Hydraulic systems exposed to high water contamination and dirt, including industrial machinery, construction equipment, agricultural hydraulics, and machine tools. It ensures smooth sliding of hydraulic components, prevents stick-slip, and maintains efficient clutch and gear operation.

**Application:** Hydraulic systems

**Drain Interval:** HLP-D 22,32,46 and 68 Up to 6000hr , HLP-D 100 : 5000hr , HLP-D 150 : 4000hr

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## Product Overview

**HYDRÖI Hydraulic Oil HLP-D** is a premium mineral-based detergent hydraulic oil, designed to offer superior system cleanliness, wear protection, and thermal stability. It contains specialized detergent and dispersant additives that effectively suspend contaminants, emulsify water, and prevent deposits from forming, ensuring extended system life and smooth operation even in highly contaminated environments.

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## Application

**HYDRÖI Hydraulic Oil HLP-D** is suitable for use in:

- Hydraulic systems exposed to high levels of water contamination.
- Industrial machinery, machine tools, and mobile hydraulic units (excavators, bulldozers, wheel loaders, forklifts, and truck hydraulic systems).
- Hydraulic systems that require high detergency and dispersancy to maintain clean operation.
- Equipment where stick-slip prevention and smooth glide properties are critical

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## Performance Benefits

- **Detergent & Dispersant Properties:** Prevents deposit buildup and keeps contaminants suspended.
- **Superior Water Emulsification:** Protects components even in systems exposed to moisture.
- **High Oxidation & Thermal Stability:** Reduces sludge formation and extends oil life.
- **Excellent Wear & Corrosion Protection:** Ensures extended component life and system reliability.
- **Smooth Glide Performance:** Prevents stick-slip in hydraulic cylinders and clutch systems.
- **Optimized for High Loads:** Suitable for demanding applications requiring enhanced lubrication.

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## Performance Specifications:

- DIN 51524 Part 2 (HLP-D)
- ISO 6743/4-HM
- MAN N 698-H-LPD
- Parker Denison HF-0, HF-1, HF-2
- Sperry Vickers I-286-S, M-2950-S





## Typical Properties

Property	Unit	VG 22	VG 32	VG 46	VG 68	VG 100	VG 150
Kinematic Viscosity @ 40°C	mm <sup>2</sup> /s	22.0	32.0	46.0	68.0	100.0	150.0
Kinematic Viscosity @ 100°C	mm <sup>2</sup> /s	4.5	5.4	7.2	8.6	11.5	15.2
Viscosity Index	-	110	110	111	111	110	108
Density @ 15°C	kg/m <sup>3</sup>	0.875	0.879	0.880	0.884	0.890	0.895
Flash Point (COC)	°C	205	210	220	225	230	240
Pour Point	°C	-30	-30	-30	-27	-24	-21
FZG Gear Test (A/8.3/90)	Failure Stage	11	12	12	12	12	12
Foam Tendency (Seq I, 24°C)	ml	20/0	20/0	20/0	20/0	20/0	20/0
Rust Protection (ASTM D665B)	-	Pass	Pass	Pass	Pass	Pass	Pass

## Health, Safety, and Environmental Guidelines:

- **Handling:** Avoid prolonged skin contact; wash immediately with soap and water if contact occurs.
- **Disposal:** Dispose of used oil responsibly at authorized collection points.
- **Storage:** Store in a covered, dry environment at temperatures below 60°C. If stored outside, keep drums horizontally to prevent water ingress

## Storage Recommendations:

Store in a covered, dry environment at temperatures below 60°C. If stored outside, keep drums horizontally to avoid water ingress

