

PETRONAS HYDRAULIC HLPD SERIES

Premium Performance Detergent Enhanced Hydraulic Fluids

PETRONAS Hydraulic HLPD Series are premium performance anti-wear hydraulic fluids specially developed for a wide range of modern mobile and industrial hydraulic equipment operating under normal to heavy duty conditions, including systems where water contamination is a frequent challenge.

Formulated with high quality selected base oils enhanced with advanced anti-wear (zinc-free), anti-oxidant, anti-rust, anti-foam additives and detergent content, PETRONAS Hydraulic HLPD fluids provide excellent anti-wear protection, up to 3x longer lasting performance* and maintain high system efficiency even with up to 3% of water contamination.

PETRONAS Hydraulic HLPD Series meet or exceed key industrial specifications and OEM requirements.

*vs. minimum requirements of ISO 11158 HM for anti-wear hydraulic fluids based on TOST (ASTM D943)

Applications

PETRONAS Hydraulic HLPD Series are recommended for use in:

- various mobile and industrial hydraulic systems operating under normal to heavy duty conditions
- hydraulic systems demanding high quality anti-wear fluids
- hydraulic systems, where high water ingress (up to 3%) is possible

Features and Benefits

Features	Benefits
Low temperature protection	Ensures proper protection of equipment components during cold starts
Excellent anti-wear protection	Protects equipment components from excessive wear and provides longer equipment life
High wet and dry filterability	Maintains high filter efficiency without giving rise to undue pressure drop, thus increasing filter lifetime
High thermal and oxidation stability	Maintains performance levels under high temperatures and pressure, enabling long oil drain intervals
Excellent rust & corrosion protection	Inhibits the corrosion process that occurs in presence of water, improving equipment life
High multi metal compatibility	Compatible with most metal alloys ensuring trouble free performance of the system
High compatibility with most seal and elastomers	Compatible with most seals and elastomers, which prevents oil leaks and contamination due to seal erosion

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Technical Data Sheet

Revision Date: 23.05.2016

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Typical Properties

Characteristic	Method	Specification	32	46	68
Specific Gravity @15°C	ASTM D 4052	(1)	0,871	0,877	0,883
Kinematic Viscosity at 40°C, cSt	ASTM D 445	±10%	32	46	68
Kinematic Viscosity at 100°C, cSt	ASTM D 445	**	5,4	6,9	8,9
Viscosity Index	ASTM D 2270	(1)	102	105	104
Flash Point, °C	ASTM D 92	Report	220	220	230
Pour Point, °C	ASTM D 97	**	-33	-33	-30
TAN, mgKOH/g	ASTM D 664	(1)	0,26	0,26	0,26
FZG, Stages Passed	ISO 14635-1	Min. 10	>12	>12	>12
Copper Strip Corrosion	ASTM D 130	Max. 2	1b	1b	1b
TOST life, hours	ASTM D 943	Min. 1000	2900	2900	2900
Foam Sequence I, mL	ASTM D 892	Max. 150/0	0/0	0/0	0/0
Foam Sequence II, mL		Max. 75/0	0/0	0/0	0/0
Foam Sequence III, mL		Max. 150/0	0/0	0/0	0/0

All technical data is provided for reference only and all specification based on DIN 51524-2 (2006) and ISO 11158 HM (FDIS 2008) less demulsibility performance
 **Individual limits accordingly with each viscosity grade / (1): not required in specification / SS is available upon request including quality control limits

Performance Levels

- Daimler Chrysler DBL 6721 (2000)
- DIN 51524 Part II HLPD (2006) less demulsibility performance

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Health, Safety and Environment

This product is unlikely to present any significant health and safety hazards when used in the recommended application. Avoid contact with skin. Wash immediately with soap and water after skin contact. Do not discharge into drains, soil or water.

For further detail regarding storage, safe handling, and disposal of product, please refer to product SDS or contact us at: www.pli-petronas.com

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