

PLANTOHYD S

Environmentally friendly hydraulic and lubricating oils based on synthetic ester (HEES), rapidly biodegradable acc. to OECD 301 B > 60%, awarded with the EU Ecolabel

Description

The products of the PLANTOHYD S-series are environmentally friendly, high-performance lubricating and hydraulic oils based on special synthetic esters. They can be used universally in the temperature range from -30 °C to +90 °C and are rapidly biodegradable according to the OECD 301 B test.

The products of the PLANTOHYD S series are awarded with the EU Ecolabel. They are based on > 50% sustainable raw materials.

Application

The products of the PLANTOHYD S-series are synthetic, rapidly biodegradable oils based on sustainable raw materials (> 50%). They are exceptionally suitable for applications in mobile and stationary hydraulic systems, for which a rapidly biodegradable hydraulic oil according to ISO 15380, HEES, is recommended, especially if there is an environmental hazard to the ground, ground water or the surface waters due to leakage (construction, water resources management, agriculture, forestry).

In case of a change to the PLANTOHYD S series products the guidelines for changing fluids according to ISO 15380 must be observed.

Specifications

The products of the PLANTOHYD S-series fulfill or exceed the requirements according to:

- ISO 15380: HEES
- EU Ecolabel
- Swedish Standard SS15 54 34

Advantages

- Based on sustainable raw materials, > 50%
- Good corrosion protection
- Rapidly biodegradable according to OECD 301 B > 60%
- Multigrade characteristics (rationalisation of varieties)
- Excellent lubricating properties
- Very good viscosity temperature behaviour
- Good low-temperature behaviour
- Highest shear stability
- Natural cleaning capacity
- High ageing stability
- Excellent wear protection
- Good material compatibility

EU Ecolabel : DE/027/273



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Typical technical data:

Product name		15	22	
Properties	Unit			Test method
ISO VG		15	22	DIN 51519
Kinematic viscosity				DIN EN ISO 3104
at - 20 °C	mm ² /s	290	475	
at 0 °C	mm ² /s	80	120	
at 40 °C	mm ² /s	15	22	
at 100 °C	mm ² /s	4.1	5.4	
Viscosity index	-	191	198	DIN ISO 2909
Density at 15 °C	kg/m ³	893	901	DIN 51757
Colour	ASTM	1.0	1.0	DIN ISO 2049
Flash point in open cup acc. to Cleveland	°C	200	200	DIN ISO 2592
Pourpoint	°C	-33	-33	DIN ISO 3016
Neutralisation number	mgKOH/g	0.7	0.7	DIN 51558-1
Scuffing and scoring test, FZG A/8.3/90	failure load stage	10	11	DIN ISO 14635-1
Air release at 50 °C	min	2	2	DIN ISO 9120
Vickers pump test, type V105C				DIN 51389
- weight loss vane	mg	-	pass (< 30)	
- weight loss ring	mg	-	pass (< 120)	
Effect on sealing materials:		60 °C	60 °C	ISO 6072
HNBR, 1008 h:				
- change of Shore A hardness	Shore	- 6.7	- 5.5	
- relative change of volume	%	+ 9.7	+ 8.7	
FKM, 1008 h:				
- change of Shore A hardness	Shore	- 0.7	- 0.4	
- relative change of volume	%	+ 0.8	+ 0.6	

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Health, Safety and Environment - information is provided for products in the relevant Safety Data Sheet. This provides guidance on potential hazards, precautions and first-aid measures, together with environmental effects and disposal of used products.

While the information and figures given here are typical of current production and conform to specification, minor variations may occur. No warranty expressed or implied is given concerning the accuracy of the information or the suitability of the products

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Environmentally friendly hydraulic and lubricating oils based on synthetic ester (HEES), rapidly biodegradable acc. to OECD 301 B > 60%, awarded with the EU Ecolabel

Typical technical data:

Product name		32	46	68	
Properties	Unit				Test method
ISO VG		32	46	68	DIN 51519
Kinematic viscosity					DIN EN ISO 3104
at - 20 °C	mm ² /s	1060	1500	3300	
at 0 °C	mm ² /s	205	330	590	
at 40 °C	mm ² /s	32	46	68	
at 100 °C	mm ² /s	7.1	9.2	12.3	
Viscosity index	-	194	187	181	DIN ISO 2909
Density at 15 °C	kg/m ³	910	920	924	DIN 51757
Colour	ASTM	1.0	1.0	1.0	DIN ISO 2049
Flash point in open cup acc. to Cleveland	°C	206	300	300	DIN ISO 2592
Pourpoint	°C	-36	-45	-36	DIN ISO 3016
Neutralisation number	mgKOH/g	0.8	1.1	1.1	DIN 51558-1
Scuffing and scoring test, FZG A/8.3/90	failure load stage	12	12	12	DIN ISO 14635-1
Air release at 50 °C	min	< 3	< 3	5	DIN ISO 9120
Vickers pump test, type V105C		pass	pass	pass	DIN 51389
- weight loss vane	mg	< 30	< 30	< 30	
- weight loss ring	mg	< 120	< 120	< 120	
Effect on sealing materials:		80 °C	80 °C	100 °C	ISO 6072
HNBR, 1008 h:					
- change of Shore A hardness	Shore	- 4.6	- 3.3	- 3.2	
- relative change of volume	%	+ 7.6	+ 5.8	+ 5.6	
FKM, 1008 h:					ISO 6072
- change of Shore A hardness	Shore	- 0.3	+ 1.1	+ 0.9	
- relative change of volume	%	+ 0.5	+ 0.5	+ 0.4	

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