PLANTOHYD S

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

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 European Ecolabel EEL. 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
- European Ecolabel (EEL)
  (Euro Margerite)

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: PLANTOHYD 15 S: DE/027/154
PLANTOHYD 22 S: DE/027/155
PLANTOHYD 32 S: DE/027/156
PLANTOHYD 46 S: DE/027/157
PLANTOHYD 68 S: DE/027/158

EU Ecolabel
www.ecolabel.eu

Better for the environment ...
- geringfügige Schädigung von Wasser und Boden bei der Anwendung
- enthält einen großen Anteil von Ausgangsstoffen auf biologischer Basis
- reduced harm for water and soil during use
- contains a large fraction of biobased material

... better for you.

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Typical technical data:

Product name		**15**	**22**	
Properties	**Unit**			**Test method**
ISO VG		15	22	DIN 51519
Kinematic viscosity at - 20 °C at 0 °C at 40 °C at 100 °C	 mm^2/s mm^2/s mm^2/s mm^2/s	 290 80 15 4.1	 475 120 22 5.4	DIN EN ISO 3104
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 - weight loss vane - weight loss ring	 mg mg	 - -	 pass (< 30) pass (< 120)	DIN 51389
Effect on sealing materials:		60 °C	60 °C	ISO 6072
HNBR, 1008 h: - change of Shore A hardness - relative change of volume	 Shore %	 - 6.7 + 9.7	 - 5.5 + 8.7	
FKM, 1008 h: - change of Shore A hardness - relative change of volume	 Shore %	 - 0.7 + 0.8	 - 0.4 + 0.6	

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Typical technical data:

Product name		**32**	**46**	**68**	
Properties	**Unit**				**Test method**
ISO VG		32	46	68	DIN 51519
Kinematic viscosity at - 20 °C at 0 °C at 40 °C at 100 °C	 mm^2/s mm^2/s mm^2/s mm^2/s	 1060 205 32 7.1	 1500 330 46 9.2	 3300 590 68 12.3	DIN EN ISO 3104
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 - weight loss vane - weight loss ring	 mg mg	pass < 30 < 120	pass < 30 < 120	pass < 30 < 120	DIN 51389
Effect on sealing materials:		80 °C	80 °C	100 °C	ISO 6072
HNBR, 1008 h: - change of Shore A hardness - relative change of volume	 Shore %	 - 4.6 + 7.6	 - 3.3 + 5.8	 - 3.2 + 5.6	
FKM, 1008 h: - change of Shore A hardness - relative change of volume	 Shore %	 - 0.3 + 0.5	 + 1.1 + 0.5	 + 0.9 + 0.4	ISO 6072

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