

RE 90 221-1/01.02

Replaces: 11.01

Rexroth
 Bosch Group

Environmentally Acceptable Hydraulic Fluids HETG, HEPG, HEES for Axial Piston Units

Table of environmentally acceptable hydraulic fluids

◆ tested by BHY.

This does not imply that such tests were exhaustive or that a recommendation of such fluids is implied. All rights reserved, subject to revision!

Type of fluid	Vegetable oil based hydraulic fluids, HETG				Synthetic hydraulic fluids based on Polyglycol, HEPG			Synthetic hydraulic fluids based on esters, HEES			
ISO-viscosity class	VG 22	VG 32	VG 46	VG 68	VG 22	VG 32	VG 46	VG 22	VG 32	VG 46	VG 68
Manufacturer ▼											
ADDINOL			Ökoplus HETG 32-68							Ökosynth HEES 46	
AGIP			Autol Bio HVI					Arnica S22	Arnica S32	Autol HE46 Arnica S46	Arnica S68
ARAL							BAF-46 Vitam			EHF 46 Vitam	
ASEOL						Aqua VG 32	Aqua VG 46	Terra 15		Terra 46	Terra 68
AUSCHEM ITALIA		Biofluid FR 32	Biofluid FR 46	Biofluid FR 68						Pentaflux 46 AT	Pentaflux 68 AT
AUTOL			Autol Bio HVI 46								
AVIA		Avilub Hydraulic Bio 32	Avilub Hydraulic Bio 46 u		Avia Hydrosynth 22	Avia Hydrosynth 32 u	Avia Hydrosynth 46		Avia ¹⁾ Syntofluid N 32	Avia ¹⁾ Syntofluid N 46 ◆	Avia ¹⁾ Syntofluid N 68
BayWa									Plantohyd Super S	Plantohyd Super S	Plantohyd Super S
BEICHEM		Bio-Hydraulik-öl 32			Hydrostar UWF 22	Hydrostar UWF 32	Hydrostar UWF 46		Hydrostar HEP 32	Hydrostar HEP 46	Hydrostar HEP 68
BINOL			Hydrap 46								
Biostar Kellersberg			Biostar								
BLASER										Blasol LP8905	
BP		Biohyd 32	Biohyd 46						Biohyd ¹⁾ SE-S 32	Biohyd ¹⁾ SE-S 46 ◆	Biohyd ¹⁾ SE-S 68
Bremer & Leguil								Rivolta SBH 11		Rivolta SBH 23	
BUCHER & CIE MOTOREX									Oekosynt 2246	Oekosynt 3268 ◆	
CASTROL	Biotec ◆ Alpin 22	Biotec ◆ HVX							Carelube HES		
Cognis Corporation									ProEco 332 ProEco ¹⁾ 432LL	ProEco 346 ProEco ¹⁾ 446LL	ProEco 368 ProEco ¹⁾ 468LL

¹⁾ Saturated Esters: These fluids are the most suitable for highest hydraulic strain (e.g. in construction machines)

Mobile Hydraulics

Type of fluid	Vegetable oil based hydraulic fluids, HETG				Synthetic hydraulic fluids based on Polyglycol, HEPG			Synthetic hydraulic fluids based on esters, HEES			
ISO-viscosity class	VG 22	VG 32	VG 46	VG 68	VG 22	VG 32	VG 46	VG 22	VG 32	VG 46	VG 68
Manufacturer ▼											
CONDAT									CONDAT Bio 32	CONDAT Bio 46	CONDAT Bio 68
DEA		Econa R 32				Econa PG 32	Econa PG 46			Econa ¹⁾ E 46 ♦	
DELTIN			Deltinol Bio-Hydraulik-öl HVI 46								
ESSO			Univis HETG			Univis WEPG 32	Univis WEPG 46			Univis HEES 46	
EVVA-AUSTRIA			Bio-Hydraulik-öl 40								
FINKE		Aviaticon HV-BD 36						22	Aviaticon 32	HY HE 46	68
FRAGOL			Hydraulic V 32		Hydraulic TR 22	Hydraulic TR 32 ♦	Hydraulic TR 46	Hydraulic HE 22		Hydraulic HE 46	
FUCHS		Plantohyd N 32	Plantohyd N 46	Plantohyd N 68		Renolin PGE 32	Renolin PGE 46 ♦	Plantohyd S 22	Plantohyd S 32	Plantohyd S 46	Plantohyd S 68
								Plantohyd Polar 15S + 22S	Plantosyn 3268 ¹⁾	Plantosyn 3268 ¹⁾	Plantosyn 3268 ¹⁾
								Plantosyn 15 HVI ¹⁾		Plantosyn 46 HVI ♦ ¹⁾	Plantosyn 68 HVI ♦ ¹⁾
GLOBOIL									BHF 32	BHF 46	BHF 68
GREENOCO The Green Oil Comp. Inc.		Greenwood Hydraulic Fluid									
		32	46	68							
HESSOL		HTG 37								HLP 46 Bio	
Houghton		Hydro drive B-32	Hydro drive B-46			Hydro drive P-32	Hydro drive P-46		Vital Fluid SL 32/B	Vital Fluid SL 46/B	Vital Fluid SL 68/B
KAJO-Chemie		Bio-Hydrauliköl HETG 32						HEES 22	Bio-Hydrauliköl HEES 32-S	HEES 46	HEES 68-S
								HEES 22-S		HEES 46-S	
KENDALL Demmler & Co Schweiz										Synth. Natura 46HV	
Klöckner		Deutz Oel Bio-HVI 36							DEUTZ OEL H-EP 32 BA	46 BA	68 BA
Kompressol		UW 500/32	UW 500/46			Biovis					
Kuwait Petroleum Q8									Holbein 32	Holbein 46	
Lubricating Dutchman									LD Bio-32	Hydrestner HVI 46	68
Leprince-Siveke										Leprincol BSE 46	Hydrosynt 68

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Manufacturer ▼											
LUBRITECH Fuchs		Eco-HYD 32 N	Eco-HYD 46 N	Eco-HYD 68 N					Eco-HYD 32 S	Eco-HYD 46 S S Plus ◆	Eco-HYD 68 S
Lubrizol			TH 92451								
MOBIL		EAL 224 H								EAL Syn-draulic 46 ◆ Hydraulic Oil UF 46 ◆	
MOBIL/USA									Envirosyn 32 H	Envirosyn 46 H ◆	Envirosyn 68 H
MOL RT Ungarn		Biokom HID 32	Biokom HID 46						Biokom HID 46S		
Molyduval									Chem-lube 5126		
ÖMV	Biohyd M 15	Biohyd M 32	Biohyd M 46	Biohyd M 68				Biohyd MS 15	Biohyd MT 32 MS 32	Biohyd MT 46 MS 46 ◆	Biohyd MS 68
OEST		Bio-Hydraulik-öl HVI 34								Bio Synth. HYD 46	
OPTIMOL										HYDO BS 46	HYDO BS 68
PAKELO										Geolube Hydraulic EP-46	
PANOLIN, Schweiz								HLP Synth 15	HLP Synth 32 ◆ 1)	HLP Synth 46 ◆ 1)	HLP Synth 68 1)
PETROFER										Envolubric HE 46	Envolubric HE 68
Quaker Chemical			Greensave N 30							Green-save 46	
RAISION Finland		Raisio Bio Safe 32 NE ◆		Raisio Bio Safe 68 NE						Raisio Bio Safe 46 SE	Raisio Bio Safe 68 SE
SHELL		Naturelle HF-R32 ◆			Fluid BD 22	Fluid BD 32 ◆	Fluid BD 46		Naturelle HF-EX32 1)	Naturelle HF-E 46	Naturelle HF-E 68
Sollner		Connexol HD 32-68									
Strub & Co Schmiertechnik CH-Reiden								Hydrosynt HEES 22	Hydrosynt HEES 32	Hydrosynt HEES 46	Hydrosynt HEES 68
STL France			Colzec TRF								

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Manufacturer ▼											
Stuart							Hydrocor E 46 ISOCOR E46			ISOCOR HF 46	ISOCOR HF 68 ISOCOR HF 2000
TAMOIL									Green Hydro Safety 32 46 68		
TOTAL FINA ELF			TOTAL Biohydran RS 38 B						TOTAL Biohydran TMP 32	TOTAL Biohydran TMP 46 TOTAL Biohydran SE 46 ¹⁾	TOTAL Biohydran TMP 68
Tribol									Bio Top 1448/32	Bio Top 1448/46	Bio Top 1448/68
VALVOLINE			Ultraplant 40				Ultrasyn PG 46		Unisyn HLP 22/46	Unisyn HLP 32/68	
WESTFALEN AG		Bio- Forbex R 32	Bio- Forbex R 46							Bio- Forbex E 46	
Wintershall		Wiolgan HR 32									
WISURA			Hydroma NAT 40								
YORK Ginouves									York 777 Bio VG 32 ◆	York 777 Bio VG 46 ◆	
Zeller & Gmelin			Divinol HTG 46							Divinol HE 46	

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Guarantee of correct operation of hydrostatic installations

Environmentally acceptable hydraulic fluids to RE 90221.

This guarantee is limited to the supply of suitable materials and correct functioning of the items supplied.

Requirements:

- The fulfilment of the minimum requirements of DIN 51 524, parts 2 and 3 (FZG ≥ 10) (this is only **partially** fulfilled by vegetable oil based fluids).
- Maintenance of the correct viscosity limits.
- Operation within the limits set by the technical data with respect to the fluid characteristics (e.g. density, the compatibility of the fluid with paints, filter materials and seals).
- Maintenance of the correct degree of fluid cleanliness.
- Regulated maintenance of the installation and changing the fluid at the intervals recommended by the manufacturer and at least as often as laid down in publication RE 90221.

This guarantee is limited to 6 **months** after commissioning or **9 months** after the supply of the units, **whichever is the shorter**.

Where not otherwise stated, our standard terms and conditions apply.

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The specified data is for product description purposes only and may not be deemed to be guaranteed unless expressly confirmed in the contract.