



HOXE/09-1



# Synthetic Hydraulic Oil

## BioSafe HO 15/32/46/68 XE

BioSafe HO XE is environmentally acceptable hydraulic oils based on specially saturated synthetic esters, produced from completely renewable sources – vegetable oil.

BioSafe HO XE is the first hydraulic oils series that has been awarded the licence to use EU-Ecolabel. (Licence no: FI/27/1)

BioSafe HO XE distinguishing properties are high shear stability, good lubricating properties, very good low- and high temperature properties and very good anticorrosion properties. The high technical performance and durability makes it possible for use at extended drain periods.

BioSafe HO XE is products classified as long-life hydraulic oils.

BioSafe HO XE is a range of products in four different ISO VG-grades. Right choice of grade has to be made according to the manufacturer's recommendations and the running situation. That can be hard running conditions, when increased running security at extreme conditions is wanted, when the current product doesn't reach the recommended drain interval, when oil change's is time demanding or difficult to accomplish, when higher increase in durability is wanted and lower running costs

#### Specifications:

- Swedish Standard 15 54 34 BV EAL
- ISO/FDIS 15380 HEES
- Volvo VCE 1286,1

#### Physical and Chemical Data (typical)

Analysis	Method	Unit	HO 15 XE	HO 32 XE	HO 46 XE	HO 68 XE
Viscosity at 40°C	ISO 3104	mm <sup>2</sup> /s	15	32	46	68
Viscosity at 100°C		mm <sup>2</sup> /s	4	6	8	11,5
Viscosity at -20°C		mm <sup>2</sup> /s	280	1100	1900	4200
Viscosity at -25°C		mm <sup>2</sup> /s	610	2700	4800	-
Viscosity index	ASTM D 2270		155	150	160	150
Pour Point	ISO 3016, ASTM D 97	°C	-42	-45	-50	-42
Density at 20°C	ISO 3675	kg/m <sup>3</sup>	921	957	938	976
Flash Point	ASTM D 93	°C	>240			

#### Health and Safety Data

Analysis	Method	Unit	HO 15 XE	HO 32 XE	HO 46 XE	HO 68 XE
Biodegradability	OECD 301 F	(%)	Readily biodegradable >80			
Toxicity	OECD 201-203		Non toxic			
Bioaccumulation	OECD 305 D		No accumulation			
Skin and eye irritation	OECD 401-402, 404-405		Not irritant			
Biological renewability		%	>80			

Product codes		112300	112310	112320	112330
Packaging	1000-I IBC (02)		X	X	
	200-I drum (03)	X	X	X	X
	20-I pail (05)		X	X	

**Storage:** In sealed container, protected from rain.

A company in the AAK Group

Binol BioSafe Oy  
P.O. Box 101  
FIN-212 01 Raisio  
FINLAND

Phone +358 2 88 08 900  
Fax +358 2 443 2798

[binol@aaak.com](mailto:binol@aaak.com)  
[www.binol.com](http://www.binol.com)

