

**BioSafe XE** are environmentally acceptable hydraulic oils based on specially saturated synthetic esters, produced from completely renewable sources – vegetable oil. Therefore they do not effect the natural cycle of the elements in a negative way.

**BioSafe XE** products are developed with the intention to combine good environmental with high technical performances. They are recommended for heavy-duty use in mobile as well as stationary hydraulic systems.

**BioSafe XE** has a very high viscosity index, high shear stability and good lubricating properties and is characterized by its extreme high thermal properties that will result in very long durability and drain intervals, as well as low running costs.

**BioSafe XE** is a range of products in three different ISO VG-grades. The right choice of grade is mainly depended on applications, ambient temperatures and working conditions. Generally 32XE is recommended at low temperatures while 68XE is recommended at high. 46XE is an all round product.

**Specifications:**

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

**Physical and chemical data (typical) :**

<u>Analysis</u>	<u>Method</u>	<u>Unit</u>	<u>HO15</u>	<u>HO32</u>	<u>HO46</u>	<u>HO68</u>
Viscosity at 40°C	SS-ISO 3104	mm <sup>2</sup> /s	15	30	47.1	62.8
Viscosity at 100°C			4.0	5.9	8.0	11.5
Viscosity at -20°C			-	-	1450	4100
Viscosity at -25°C			-	1300	2000	5080
Viscosity Index	ASTM D 2270		155	150	154	149
Pour Point	ISO 3016, ASTM D97	°C	-42	-45	-45	-39
Density at 20°C	ISO 3675	kg/m <sup>3</sup>	921	950	961	970
Flash point	ASTM D 93	°C			>200	

**Health and safety data:**

<u>Analysis</u>	<u>Method</u>	<u>Unit</u>	<u>HO15</u>	<u>HO32</u>	<u>HO46</u>	<u>HO68</u>
Biodegradability	OECD 301B	(%)	Readily biodegradable >80			
Toxicity	OECD 201-203	mg/kg	Non toxic			
Bioaccumulation	OECD 305 D		No accumulation			
Skin and eye irritation	OECD 401-402		Not irritating 404-405			
Biological renewability		%	>80			



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