



## Gulf Harmony Bio-Synth

### Biodegradable Hydraulic Fluid

#### Product Description

**Gulf Harmony Bio-Synth** series are biodegradable hydraulic oils with extra high viscosity index and extremely low pour point specially designed for forestry machinery and equipment operating in extreme climatic conditions and environmentally sensitive area like Arctic climate area. These are formulated with biodegradable synthetic base stocks and specially selected additive system to meet the requirements of modern hydraulic systems. These oils meet the environmental requirements of Swedish Standard SS 15 54 34 and ISO VG 46 is on the list of environmentally accepted hydraulic fluids by Testing and Research Institute of Sweden (SP).

#### Features & Benefits

- Specially selected Bio-degradable material has a renewable content of more than 90% and hence the product has WGK 1 rating according to the German WGK classification
- Extremely high viscosity index and low pour point makes these oils suitable for cold climate operation.
- Good thermo-oxidative stability reduces deposit formation and improves pump & valve performance
- Excellent anti-wear property results in longer pump life and reduced maintenance costs
- Special rust & corrosion inhibitors protect multi-metallurgy components against corrosion
- Compatible with multi-metals and sealing materials commonly used in hydraulic systems

#### Applications

- Environmentally sensitive areas requiring fluids which are virtually non-toxic and readily biodegradable
- High performance, heavy duty hydraulic and power transmission systems of forestry machinery and equipment operating in extreme climatic conditions like Arctic climate area.
- Other hydraulic systems in marine, construction, mining, agriculture, manufacturing and mobile application requiring such quality bio-degradable hydraulic fluids

#### Specifications, Approvals & Typical Properties

ISO Viscosity grades	32	46	68	
Meets the following Specifications				
DIN ISO 15380, VDMA 24568 HEES	x	x	x	
Swedish Standard SS 15 54 34	x	x	x	
Bosch Rexroth RD 90221-1	x	x	x	
Has the following Approvals				
Swedish Standard SS 15 54 34		x		
Typical Properties				
Test Parameters	ASTM	Test Values		
Viscosity @ 0 °C, cSt	D 445	178	306	510
Viscosity @ 40 °C, cSt	D 445	31.4	45.4	65
Viscosity Index	D 2270	189	191	187
Flash Point, °C	D 92	>190	>310	>310
Pour Point, °C	D 97	-57	-48	-45
Density @ 15°C, Kg/l	D 1298	0.895	0.913	0.917
Rust Test	D 665A/B	Pass	Pass	Pass
Copper Corrosion (3 hrs @ 100°C)	D 130	1a	1a	1a
Foam after 10 minutes for all sequences	D 892	Nil	Nil	Nil
FZG, fail load stage	DIN 51324	11	10	10
Biodegradability, % readily biodegradable	OECD 301B	>80	>80	>80

September 2011

Properties mentioned above are typical only and minor variations, which do not affect the product performances, are to be expected in normal manufacturing. The above information is based on past history of the grade only and must not be construed as a guarantee of performance. Follow equipment manufacturer's recommendations for performance level and viscosity grade. The Material Safety Data Sheet for this product is available from your nearest Gulf Distributor.

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