



PRODUCT DATA SHEET

GulfSea BD Hydraulic Oils

Product Description

GulfSea BD Hydraulic Oils are a range of environmentally acceptable lubricants (EALs). These HEES fluids are based on fully saturated renewable esters using state-of-the-art ashless, zinc-free additives.

Applications

The **GulfSea BD Hydraulic Oil** range can be used in hydraulic applications in sensitive marine environments, where there is potential for fluid loss to occur and where water contamination is below 1000ppm.

Typical applications include:

- CPP's
- Water Tight Doors
- Ramps
- Platforms
- Davits
- Cranes
- Winches
- Capstans
- Some designs of Stabilisers

Features

- **GulfSea BD Hydraulic Oils** are biodegradable according to OECD test 301B, are considered minimally toxic according to OECD tests 201/202/203 and as such meets the US EPA VGP 2013 / VIDA definition of an Environmentally Acceptable Lubricant.
- The **GulfSea BD Hydraulic Oil** range has an excellent viscosity temperature profile and unlike many high VI mineral hydraulic fluids does not use viscosity index improvers and will not shear down in use.
- **GulfSea BD Hydraulic Oils** exhibit good oxidation properties outperforming competing biodegradable hydraulic fluids and many mineral oil based products, giving long service life.

Benefits

- Extended fluid life resulting in less equipment downtime
- Improved lubricity resulting in less wear and longer pump life
- Good extreme temperature performance (-35°C to +100°C)
- High Viscosity Index (VI) ensuring the fluid remains within the desired viscosity over a broader temperature range
- Good oxidative and thermal stability resulting in less fluid thickening and system failures
- Superior demulsification giving excellent water separation

Due to continual product research and development, the information contained herein is subject to change without notification.
Typical Properties may vary slightly.



Marine

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Performance

- **WEAR PROTECTION:** Provides excellent pump protection to meet the demands of modern hydraulic systems. It passes the demanding V104C, 35VQ25 and T6H20C pump tests. Also approved by Eaton to 03-401-2010 Rev1 and Parker Hannifin Denison as HF1, HF2 and HF6 fluids. It passes FZG Load Stage 12.
- **SEAL COMPATIBILITY:** Compatible with standard NBR1, HNBR and FKM seal elastomers. It should not be used in systems with neoprene, butyl rubber and EPDM.
- **DEMULSIFICATION:** Separates readily from water allowing easy water removal when contaminated.
- **HYDROLYTIC STABILITY:** Outperforms similar products in the Rolls Royce 1006 Hydrolytic Stability test. In common with other biodegradable ester fluids, water content must be kept below 1000 ppm.
- **FOAMING / AIR RELEASE:** Passes the foam and air release requirements of ISO 15380.
- **VISCOSITY INDEX:** Exceeds the requirements of DIN 51524-3 and passes the DIN 51350-6 KRL Shear Test. **GulfSea BD Hydraulic Oils** have an excellent viscosity temperature profile and, unlike many high VI mineral hydraulic fluids, does not use viscosity index improvers and will not shear down in use.
- **CHANGE-OVER:** Miscible with mineral oil but it is recommended that, following normal good practice, the previous oil is fully drained. Depending on the age and condition of the previous oil or there is greater than 5% carry over a flush fill should be considered

Typical Properties

GulfSea BD Hydraulic Oils				
	BD 32	BD 46	BD 68	BD 100
Appearance	Clear Yellow	Clear Yellow	Clear Yellow	Clear Yellow
Viscosity @ 40°C cSt	32	46	68	100
Viscosity Index	167	175	173	170
Density @ 15°C kg/ltr	0.875	0.882	0.886	0.890
Pour Point °C	-51	-48	-48	-48
Flash Point (COC) °C	>175	>185	>195	>205
Shelf Life: Five years in original containers while stored out of direct sunlight				

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