



# HYDROX BIO: The IdEAL Solution

The Environmentally Acceptable Sterntube Lubricant delivering superior performance and wear protection even when water ingress occurs

- Verified lubrication at high water levels
- Protects bearings against corrosion
- Class approved
- ISO 68, 100 & 220 available

**For sterntubes, stabiliser bearings and CPP hubs**



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Accredited to the ISO 9001  
Quality Standard and the  
ISO 14001 Environmental  
Management Standard



FM 1851

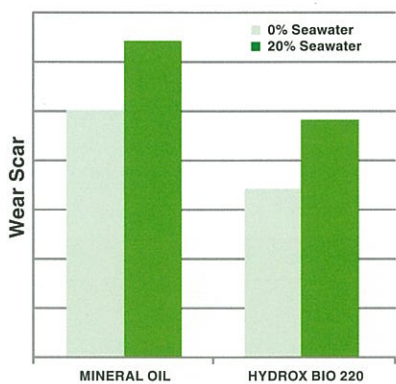
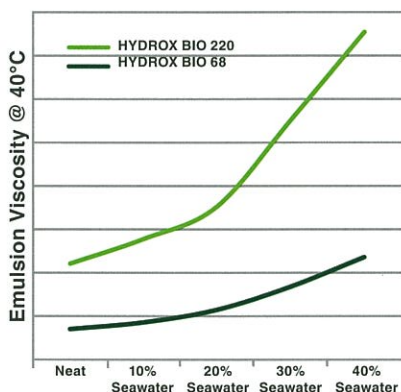


EMS 40717





Using HYDROX BIO lubricants dramatically reduces wear to sterntube bearings in the event of seawater ingress.



HYDROX BIO lubricants (ISO VG 68, 100 and 220) are biodegradable lubricants based on synthetic esters, developed primarily for use in sterntubes and bearings where water ingress may occur. The products provide:

- Superior level of lubrication even when water ingress occurs
- Excellent wear protection
- Excellent corrosion protection
- Compatibility with metals commonly used
- Biodegradable and non-toxic

HYDROX BIO lubricants will absorb any sea or fresh water entering the sterntube to form a fluid emulsion. This reduces the risk of free water being present and continues to provide the required lubrication and corrosion protection. (Conventional oils do not emulsify in the same way and tend to separate, exposing components to free water and potential wear damage.)

HYDROX BIO lubricants achieve a biodegradability of greater than 60% in the 28 day OECD 301B and OECD 306 tests and are considered non-toxic in the marine environment based on the following results:

Fish LC50 exceeds 1000mg/l;  
Daphnia EC50 exceeds 1000mg/l;  
Algae EC50 exceeds 1000mg/l.

**HYDROX BIO meets the detailed ecological definitions and requirements laid down in the 2013 Vessel General Permit (VGP) published by the US EPA in March 2013.**

HYDROX BIO lubricants (both neat oil and emulsion including 20% water contamination) have been successfully tested by Class and their stability, lubricating and corrosion protection performance have been verified by Lloyds Register.

### HYDROX BIO 68 & BIO 100

HYDROX BIO 68 and HYDROX BIO 100 are the viscosity grades generally recommended by the bearing and seal manufacturers for regular running in the sterntube. They can also be used in certain stabiliser systems and CPP hubs.

**These products are approved by many of the leading OEMs such as SKF BVI, Wärtsilä and Kemel for up to 5 years when used with OEM elastomers recommended for EALs. For specific details please contact us.**

### HYDROX BIO 220

HYDROX BIO 220 has become widely accepted as the lubricant of choice should vessels require emergency assistance in reducing leakage from the sterntube past a damaged or worn aft seal. It outperforms other competing biodegradable leak reducing lubricants by forming a stable, high viscosity emulsion at the point of water entry.

In the majority of cases a significant reduction in leakage rate can be achieved, typically up to 70%. The lubricant offers the greatest benefit when used to completely fill the sterntube system.

## At a glance

Product	Description	Typical Viscosity (cst @40°C)	Viscosity Index	Density (kg/l @15°C)	Pour Point ASTM D7346 (°C)	Anti corrosion SKF Water Emcor Test	VGP Compliant	Emulsifiable
HYDROX BIO 68	Emulsifiable, biodegradable sterntube lubricant for regular use and lubrication of some stabiliser bearings and CPP hubs.	68	215	0.92	< -24	Passes	✓	✓
HYDROX BIO 100		100	205	0.92	< -24	Passes	✓	✓
HYDROX BIO 220	Emulsifiable, biodegradable sterntube lubricant for use in the event of outboard leakage.	220	200	0.93	< -12	Passes	✓	✓

to find out more visit:  
[www.vickers-oil.com](http://www.vickers-oil.com)

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