

BioMax Stern Tube EAL

ENVIRONMENTALLY ACCEPTABLE STERN TUBE LUBRICANT

Royal Purple's BioMax Stern Tube Oil is an environmentally acceptable, synthetic, high performance lubricant formulated for stern tube lubrications in marine applications. This product is European Ecolabel approved, meets the US EPA 2013 Vessel General Permit (VGP) guidelines as an Environmentally Acceptable Lubricant (EAL).

BioMax Stern Tube Oils are biodegradable, non-emulsifying, non-bioaccumulative, minimally toxicity, provides excellent seals compatibility in preventing leakage, protection for bearings, propeller shaft and stern tube systems at varying operating temperature conditions.

The long life and noncorrosive BioMax Stern Tube Oil greatly increase reliability, efficiency as well as exceptional thermal and oxidative stability at high temperatures in highly corrosive environments. It gains its performance advantage over competing oils through its superior blend of renewable synthetic base oils plus Royal Purple's proprietary Synerlec® additive technology. This unique, synthetic additive technology is proven to prevent bearing failures, corrosion, rust, reduce equipment downtime, provides longevity and energy savings.



PERFORMANCE ADVANTAGES

- **LONGER OIL LIFE** - BioMax Stern Tube Oil has outstanding oxidation, thermal and hydrolytic stability with keep clean deposit control agents
- **CORROSION PROTECTION** - Excellent protection against rust and corrosion in water environment. Protect bearings, stern tube systems and surfaces exposed to seawater
- **ELASTOMER COMPATIBILITY**- Superior seal protection, elastomers maintain mechanical and physical properties, diminishes rubber degradation which prevents ingress of water and excessive loss of oil.
- **NON-EMULSIFYING**- Rapidly separates from water, which can easily be drained from the bottom of oil reservoir to keep the oil dry.
- **IMPROVED SYSTEM PERFORMANCE** - BioMax Stern Tube Oil lowers operating temperatures, improves efficiency, consistent performance in severe and challenging stern tube systems.

SPECIFICATIONS AND APPROVALS

- EU Ecolabel License No. BE/027/004
- US EPA VGP (2013)
- AEGIR Marine
- KEMEL
- Lagersmit
- RM Propulsion

Typical Physical Properties			
Property	Test Method	100	150
Viscosity @40°C, cSt	D445	100.00	150.00
Viscosity @100°C, cSt	D445	15.2	20.6
Viscosity Index	D2270	158.0	159.0
Density @15°C, g/ml	D4052	0.878	0.894
Demulsibility, ml/ml/ml	D1401	40/40/0	42/38/0
Copper Corrosion	D130	1A	1A
Rust Test	D665B	PASS	PASS
Elastomer Compatibility	ISO 6072	PASS	PASS
Pour Point, °C/°F	D97	-39/-38	-39/-38
Flash Point, °C/°F	D92	263/506	267/512
Foam Tendency, Seq II, ml/ml	D892	0/0	0/0
Biodegradability, % (28 days)	OECD 301B	>60	>60
Toxicity (Algae), mg/L	OECD 201	>1000	>1000
Toxicity (Daphnia), mg/L	OECD 202	>1000	>1000
Toxicity (Fish), mg/L	OECD 203	>1000	>1000
Toxicity (Bacteria), mg/L	OECD 209	>1000	>1000
Bioaccumulation, log POW	OECD 107	<3	<3

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