

## 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 lubrication in marine applications. This product carries the EU Ecolabel certification identifying it as an environmentally acceptable lubricant, recognized world-wide. The EU Ecolabel certification of BioMax guarantees superior environmental and technical standards.

BioMax Stern Tube Oils are biodegradable, non-emulsifying, non-bioaccumulative, and minimally toxic, while still providing unmatched lubrication and wear protection for bearings and other stern tube components. Excellent seal compatibility prevents chemical damage to seals, mitigating leaks into or out of the stern tube, thus ensuring lubricant integrity and long-term protection.

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<sup>®</sup> 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

- UNMATCHED WEAR PROTECTION – Proprietary Synerlec<sup>®</sup> additive technology provides superior film strength and protection
- LONGER OIL LIFE - Outstanding oxidation, thermal and hydrolytic stability with keep clean deposit control agents
- EXCELLENT CORROSION PROTECTION - Protects bearings, stern tube systems and surfaces exposed to seawater
- ELASTOMER COMPATIBILITY- Superior seal protection, helps elastomers maintain mechanical/physical properties and seal
- 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 - Lowers operating temperatures and improves efficiency

#### SPECIFICATIONS AND APPROVALS

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

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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