

BIO S 100

Biodegradable Stern Tube Oil

REXOIL BIO S 100 is a high-performance, ester-based, environmentally acceptable lubricant (EAL) specifically engineered for oil-lubricated marine stern tube systems. Formulated with advanced synthetic esters and performance-enhancing additives, it provides superior lubricity, excellent hydrolytic stability, and outstanding protection against wear and corrosion in severe marine operating conditions.

Designed to meet stringent environmental regulations, including US EPA Vessel General Permit (VGP) requirements, REXOIL BIO S 100 is readily biodegradable and exhibits low aquatic toxicity, making it suitable for vessels operating in environmentally sensitive waters.

The product is recommended for use in:

- ❖ Oil-lubricated stern tube bearings,
- ❖ Controllable Pitch Propeller (CPP) hub systems,
- ❖ Thrusters and marine auxiliary systems requiring EAL,
- ❖ Seawater interface lubrication systems,
- ❖ Marine gear applications where biodegradable lubricants are specified,
- ❖ It is suitable for both new-build vessels and retrofitting existing systems (after proper system cleaning and compatibility verification).

Features and Benefits

- **Excellent Biodegradability:** Readily biodegradable formulation minimizes environmental impact in case of accidental leakage.
- **Low Aquatic Toxicity:** Safer for marine ecosystems and compliant with environmentally sensitive area requirements.
- **Superior Lubricity:** Advanced synthetic ester base provides outstanding film strength, reducing friction and extending bearing life.
- **Outstanding Wear Protection:** Protects stern tube bearings, shafts, and seals under high load and slow-speed conditions.
- **Excellent Hydrolytic Stability:** Maintains performance in the presence of water contamination, resisting breakdown and acid formation.
- **High Oxidation Stability:** Extended service life and reduced sludge formation even at elevated operating temperatures.
- **Superior Corrosion Protection:** Protects metal surfaces against seawater-induced corrosion and rust.
- **Excellent Demulsibility:** Promotes efficient water separation, helping maintain lubricant integrity and system reliability.
- **Wide Operating Temperature Range:** Reliable performance in both cold start-up and high-load marine operating conditions.
- **Seal Compatibility:** Compatible with commonly used stern tube seal materials (compatibility check recommended before conversion).

Approval and Specifications

Wärtsilä

Technical Specifications

Test	Method	Typical Properties
Kinematic Viscosity (40°C), [cSt]	ASTM D445	90,0 – 110,0
Viscosity Index	ASTM D2270	Min. 160
Density @ 15°C g/ml	ASTM D4052	0,910 – 0,935
Flash Point, °C	ASTM D92	Min. 250
Pour Point, °C	ASTM D97	Max. -30

Health and Safety

This product does not pose a significant health or safety risk when used appropriately. For detailed safety information, please refer to the Safety Data Sheet (SDS).

Storage & Handling

Store in a cool, dry, and well-ventilated area, away from direct sunlight and moisture. Keep containers tightly closed to prevent contamination. Dispose of contents and containers in accordance with local regulations.