



BIOMAX™ GEAR OIL

HIGH PERFORMANCE EAL GEAR OIL

BEYOND SYNTHETIC™

Royal Purple's BioMax™ EAL Gear Oil is an environmentally acceptable, high performance lubricant formulated for those users of gear oil products in marine applications affected by the 2013 Vessel General Permit (VGP).

BioMax Gear Oil provides excellent performance for use in sensitive environments such as thrust gears, steering gears, stern tube and other marine related services.

The long life and high film strength of BioMax Gear Oil greatly increases equipment reliability as well as provides excellent protection in highly corrosive environments. It gains its performance advantage over competing oils through its superior blend of base oils plus Royal Purple's proprietary Synerlec additive technology. This unique, synthetic additive technology is proven to make bearings and equipment run smoother, cooler, quieter, longer and more efficiently.

SYNERLEC® ADDITIVE TECHNOLOGY MAKES THE DIFFERENCE!

Synthetic oils enable Royal Purple to make superior lubricants, but it is Royal Purple's advanced Synerlec additive technology that gives its lubricants their amazing performance advantages. Synerlec additive technology truly is beyond synthetic.

Synerlec additive technology forms a tough, slippery, synthetic film on all metal surfaces. This proprietary film significantly improves lubrication: first, by increasing the oil film's thickness, and second, by increasing the oil film's toughness, both of which help to prevent metal-to-metal contact. It displaces moisture from metal surfaces and protects all metals against rust and corrosion. It also fortifies the oil against the detrimental effects of heat, which causes oil to oxidize.

PERFORMANCE ADVANTAGES

- **High Film Strength**
Royal Purple's BioMax EAL Gear Oil with Synerlec additive technology protects gear components beyond the ability of other environmentally friendly gear oils.
- **Longer Oil Life**
BioMax EAL Gear Oil has outstanding oxidation stability and keeps equipment clean.
- **Excellent Corrosion Protection**
Royal Purple's BioMax EAL Gear Oil with Synerlec additive technology's tough oil film forms an ionic bond on metal surfaces. This film not only protects during operation and acts as a preservative oil during shutdown, but it also provides instant lubrication upon startup to prevent wear.
- **Improved System Performance**
BioMax EAL Gear Oil frequently lowers operating temperatures and restores smooth, consistent performance to erratically operating gear systems.
- **Rapidly Separates from Water**
BioMax EAL Gear Oil rapidly and completely separates from water, which can easily be drained from the bottom of oil reservoir to keep the oil dry.
- **Synthetic Solvency**
BioMax EAL Gear Oil's natural solvency cleans up dirty equipment and keeps it clean.
- **Compatible with Seals**
BioMax EAL Gear Oil has excellent seal compatibility.

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TYPICAL PROPERTIES*	ASTM METHOD	ISO GRADE		
		100	150	220
Viscosity	D-445			
cSt @ 40°C		96.24	149.8	217.6
cSt @ 100°C		13.74	19.52	26.2
Viscosity Index	D-2270	144	149	154
Flash/Fire Point, °F	D-92	454/500	464/510	464/510
Pour Point, °C	D-97	-48	-51	-45
Copper Corrosion Test 3 hours @ 100°C	D-130	1A	1A	1A
Rust Test	D-665B			
Synthetic Sea Water		PASS	PASS	PASS
Elastomer Compatability 1000 hours @ 100°C HNBR-1, FKM 2	DIN ISO6072 Volume Change, %, -3 to +10 max Hardness Change, +/- 10 max Tensile Strength Change, %, 30 max Elongation Change, %, 30 max	PASS	PASS	PASS
Demulsibility Test	D-1401			
@ 180°F		42/38/1 (20)	43/37/0 (10)	43/37/0 (25)
FZG Gear Scuffing Test, A/8.3/90	ISO 14635.1	12	12	12
Load Wear Index	D-2783	55.07	51.86	52.27
Weld Load kgf	D-2783	250	250	250
Last Non-Seizure kgf	D-2783	100	80	100
Biodegradability	OECD 301 B%	>60	>60	>60
Density @ 15° C	D-4052	0.9001	0.9189	0.945

*Properties are typical and may vary