

# JAX BIO-GUARD™ GEAR OILS

EAL High Performance Gear Oils

## PRODUCT DESCRIPTION

JAX Bio-Guard Gear Oils are EAL biodegradable lubricants made from high viscosity index, saturated, synthetic ester base oils fortified with additives that deliver high industrial gear oil performance. These oils are designed to reduce maintenance costs by extending drain intervals and protecting against wear, pitting and rust.

## PRODUCT BENEFITS

- **Conforms to Environmental Standards** - Meets EAL standards such as European Eco-label and satisfies US EPA requirements for EAL lubricants which meet Vessel Incidental Discharge Act (VIDA). These standards ensure compliance in terms of biodegradability, toxicity and bio accumulation potential.
- **Wide Temperature Range** - Very high viscosity indices, low pour points and wax-free synthetic formulations make these lubricants ideal for use in wide operating temperature ranges.
- **Water Tolerant** - JAX Bio-Guard Gear Oils are hydrolytically stable and readily separate from water. This prevents unwanted oil/water emulsions that have poor lubricating properties and eases water removal from the sump.
- **Superior Extreme Pressure and Anti-wear Additive Performance** - These oils are fully formulated with proprietary, environmentally safe extreme pressure additives, antioxidants, rust inhibitors and anti-foam agents. They will provide protection against rust from water or process contaminants and prevent foaming, ensuring proper lubrication.
- **Meets AGMA Ratings for Extreme Pressure Gear Oils**



## APPLICATIONS

- Gearbox applications on seaborne transit vessels and mobil dredging equipment where there is preferred or mandated use of EAL classified lubricants
- Marine applications operating under heavy loads and shock conditions and specifying an extreme pressure lubricant
- Enclosed industrial spur, bevel, herringbone, helical and worm gears where ground or water contamination is a concern
- Chain drive sprockets and most metal-on-metal systems where ground or water contamination is a concern



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TYPICAL PROPERTIES	ISO 100	ISO 150	ISO 220	ISO 320	ISO 460	METHOD
Viscosity @ 40°C, cSt	94.06	161.42	235.46	341.82	472.22	ASTM D 445
Viscosity @ 100°C, cSt	12.90	20.08	27.89	36.87	53.67	ASTM D 445
Viscosity Index	134	144	154	155	179	ASTM D 2270
ISO Viscosity Grade	100	150	220	320	460	ASTM D 2422
SAE Viscosity Grade	85	90	90	140	140	SAE J300
Pounds per Gallon	7.651	7.701	7.783	7.856	7.903	ASTM D 1298
Specific Gravity	0.9988	0.9248	0.9346	0.9433	0.9490	ASTM D 1298
Pour Point °F (°C)	-36 (-38)	-35 (-37)	-29 (-34)	-29 (-34)	-24 (-31)	ASTM D 97
Flash Point °F (°C)	491 (255)	509 (265)	518 (270)	518(270)	525 (274)	ASTM D 92
Fire Point °F (°C)	637 (336)	635 (335)	626 (330)	622 (328)	651 (344)	ASTM D 92
Color	Straw	Straw	Straw	Straw	Straw	
Water Separability	41-39-0 (10)	42-38-0 (15)	43-37-0 (20)	43-37-0 (25)	43-37-0 (60)	ASTM D 1401
Rust Test						ASTM D 665
Method A - Distilled Water	Pass	Pass	Pass	Pass	Pass	
Method B - Synthetic Sea Water	Pass	Pass	Pass	Pass	Pass	
FZG	12	>12	>12	>12	>12	ASTM D 5182
Copper Strip Corrosion	12+	12+	12+	12+	12+	
Four-Ball Wear, mm	0.33	0.30	0.30	0.31	0.32	ASTM D 4172
Falex EP test, lbf	3000	2750	2000	2000	2750	ASTM D 3233
Four Ball Weld						ASTM D 2783
Weld Load, kgf	200	200	220	220	200	
Load Wear Index	43	41	45	47	37	
Falex Wear Test, # Teeth Used	0	0	0	0	0	ASTM D 2670
Falex Wear Test, % Journal Wear	0.095	0.068	0.094	0.027	0.095	ASTM D 2670
Falex Wear Test, %Vee-Block Wear	0	0	0	0	0	ASTM D 2670
Oxidation, Minutes to 25 psi loss	>750	>750	>750	>750	>750	ASTM D2272

JAX products undergo continual improvement in formulation and manufacture. The values indicated in this PDS are typical production values at the time of this writing. JAX reserves the right to alter and update product data and typical values at any time without notice. It is the responsibility of the installer and/or purchaser to determine if these specifications are adequate and proper for the intended application. MSDS information may be found at [jax.com](http://jax.com) or by contacting JAX INC.

## COMPATIBILITY

JAX Bio-Guard Gear Oils exhibit excellent compatibility with most EAL and industrial gear oils. Some base oil chemistries can be incompatible at different levels. Consult JAX for the compatibility rating with gear oils encountered during changeover. JAX Bio-Guard Gear Oils are compatible with mineral gear oils, most synthetic gear oils, and seals.

## PACKAGING

CONTAINER SIZE	ISO 100	ISO 150	ISO 220	ISO 320	ISO 460
2000 Pound Soft Tote	BGGOL-276	BGGOM-276	BGGON-276	BGGOP-276	BGGOQ-276
2000 Pound Cage Tote	BGGOL-276H	BGGOM-276H	BGGON-276H	BGGOP-276H	BGGOQ-276H
400 Pound Drum	BGGOL-400	BGGOM-400	BGGON-400	BGGOP-400	BGGOQ-400
120 Pound Keg	BGGOL-120	BGGOM-120	BGGON-120	BGGOP-120	BGGOQ-120
35 Pound Pail	BGGOL-035	BGGOM-035	BGGON-035	BGGOP-035	BGGOQ-035
Gallon (4/cs)	BGGOL-004	BGGOM-004	BGGON-004	BGGOP-004	BGGOQ-004