

Overview ► BioGear EP is a series of readily biodegradable extreme pressure gear lubricants designed for a variety of industrial and mobile equipment applications. Each grade of BioGear EP is designed to replace standard gear lubes within the AGMA grades. The BioGear EP series offers excellent thermal and oxidation stability and reduces operating temperatures to ensure superior service life with minimal gear, shaft, and bearing wear, all in a readily biodegradable, environmentally responsible formula.



BioGear EP is formulated featuring our proprietary **eSyn™** technology. Available in ISO grades 68,100, 150, 220 and 320.

## Typical Properties ▼

Property	ASTM Test Method	EP 68	EP 100	EP 150	EP 220	EP 320
Product Code		BG4100068	BG4100100	BG4100150	BG4100220	BG4100320
ISO Grade		68	100	150	220	320
Specific Gravity	ASTM D1298	0.91	0.91	0.91	0.91	0.92
Viscosity @40°C, cSt	ASTM D445	68	100	150	220	320
Viscosity @100°C, cSt	ASTM D445	12.9	18.0	25.2	33.0	44.5
Viscosity Index (VI)	ASTM D2270	>190	>200	>220	>220	>220
Pour Point °F (°C)	ASTM D97	-30 (-34)	-30 (-34)	-30 (-34)	-25 (-31)	-25 (-31)
Flash Point °F (°C)	ASTM D92	>500 (260)	>500 (260)	>500 (260)	>500 (260)	>500 (260)
Timken OK Load, lbs	ASTM D2509	>60	>60	>60	>60	>60
Recommended for Agma No.		2EP	3EP	4EP	5EP	6EP
FZG Load Stage	DIN 51354	12	12	12	12	12
Falex EP Fail Load	ASTM D3233	3500	3500	3500	3500	3500
Copper Corrosion	ASTM D4048	1A	1A	1A	1A	1A
Rust Test, A & B	ASTM D665	Pass	Pass	Pass	Pass	Pass
Readily Biodegradable (meaning>60%)		Pass	Pass	Pass	Pass	Pass
Biodegradability	OECD 301B	>80	>80	>85	>85	>85
Minimally Toxic		Pass	Pass	Pass	Pass	Pass
Algae (EC 50), 72 hr, mg/L	OECD 201	>14,000	>14,000	>14,000	>14,000	>14,000
Daphnia (EC 50), 48 hr, mg/L	OECD 202	>20,000	>20,000	>20,000	>20,000	>20,000
Fish (LC 50), 96 hr, mg/L	OECD 203	>30,000	>30,000	>30,000	>30,000	>30,000

Not Bioaccumulative (Calculated value as per EPA standard)		Pass	Pass	Pass	Pass	Pass
Bio-based Content, %	ASTM D6866	>93	>93	>93	>93	>93

## Key Attributes / Approvals



To be used in industrial gear applications across a wide range of industries. Use in equipment where a release into the environment is possible, where the authorities have mandated the usage of an EAL, or where a leak or spill could reach a waste stream.

- Meets AGMA 9005-E02 Industrial Gear Specification
- USDA BioPreferred Program
- Classified as Environmentally Acceptable Lubricants (EAL's) as per the EPA's guidance document that defines standards for Environmentally Acceptable Lubricants (EPA 800-R-11-002) and as required by EPA's 2013 U.S. Vessel General Permit (VGP)

See the Safety Data Sheet (SDS) for emergency, proper handling and disposal information.

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