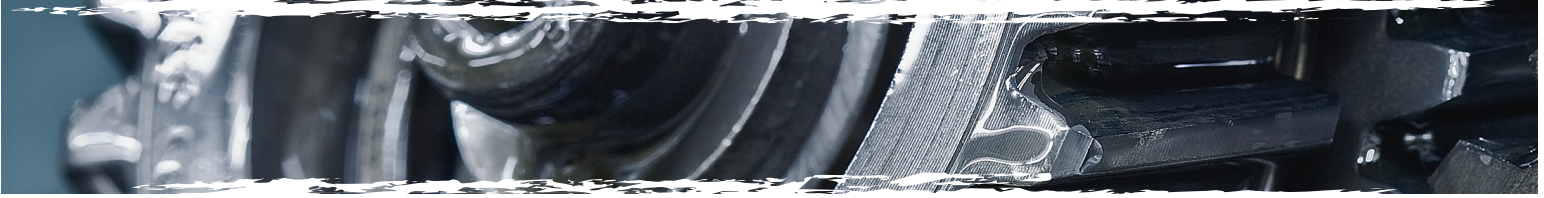


# BIOGEAR EP



**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 friendly formula. Available in ISO grades 68, 100, 150, 220 and 320.

## Specifications, Approvals, Recommendations:

- Meets AGMA 9005-E02 Industrial Gear Specification
- USDA BioPreferred Program
- Classified as Environmentally Acceptable Lubricants (EAL's) as per the EPA's 2013 U.S. Vessel General Permit (VGP)

Physical Properties	EP 68	EP 100	EP 150	EP 220	EP 320
ISO Grade	68	100	150	220	320
Specific Gravity	.91	.91	.91	.91	.92
Viscosity, ASTM D445 @40°C, cS	68	100	150	220	320
Viscosity, ASTM D445 @100°C, cS	12.9	18.0	25.2	33.0	44.5
Viscosity Index (VI), ASTM D2270	>190	>200	>220	>220	>220
Pour Point, ASTM D97, °F (°C)	-30 (-34)	-30 (-34)	-30 (-34)	-25 (-31)	-25 (-31)
Flash Point, ASTM D92, °F (°C)	>500 (260)	>500 (260)	>500 (260)	>500 (260)	>500 (260)
Timken OK Load, ASTM D2509	>60lbs	>60lbs	>60lbs	>60lbs	>60lbs
Falex EP Fail Load, ASTM D3233	3500	3500	3500	3500	3500
Copper Corrosion, ASTM D4048	1A	1A	1A	1A	1A
Rust Test, ASTM D665, A & B	PASS	PASS	PASS	PASS	PASS
Recommended for Agma No.	2EP	3EP	4EP	5EP	6EP
FZG Load Stage, DIN 51354	12	12	12	12	12
<b>Environmental Stewardship: Meets EPA requirements to be classified as an EAL per the 2013 VGP</b>					
Readily Biodegradable (meaning>60%) OECD 301B, %	PASS >80	PASS >80	PASS >85	PASS >85	PASS >85
Minimally Toxic	PASS	PASS	PASS	PASS	PASS
OECD 201 - Algae (EC 50), 72 hr, mg/L	>14,000 mg/L	>14,000 mg/L	>14,000 mg/L	>14,000 mg/L	>14,000 mg/L
OECD 202 - Daphnia (EC 50), 48 hr, mg/L	>20,000 mg/L	>20,000 mg/L	>20,000 mg/L	>20,000 mg/L	>20,000 mg/L
OECD 203 - Fish (LC 50), 96 hr, mg/L	>30,000 mg/L	>30,000 mg/L	>30,000 mg/L	>30,000 mg/L	>30,000 mg/L
Not Bioaccumulative* [* Calculated value as per EPA standard]	PASS	PASS	PASS	PASS	PASS
<b>Additional Environmental Features and Characteristics</b>					
Bio-based Content, ASTM D6866, %	>93	>93	>93	>93	>93

**Applications & Industries:** 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.