

Overview ► BioGear S is a biodegradable industrial gear oil formulated from synthetic ester base stocks. The combination of these high quality base oils and robust additive package allows for maximum equipment protection for extended drain intervals, while simultaneously providing protection for the environment. The additional lubricity of the fluid allows for efficient operation in demanding conditions. Available in ISO grades 220, 320 and 460.



BioGear S is formulated featuring our proprietary **eSyn™** technology and is available in ISO grades 220, 320 and 460.

Typical Properties ▼

Property	ASTM Test Method	S 220	S 320	S 460
Product Code		BG4900220	BG4900320	BG4900460
ISO Grade		220	320	460
Specific Gravity	ASTM D1298	.87	.87	.87
Viscosity @40°C, cSt	ASTM D445	220	320	460
Viscosity @100°C, cSt	ASTM D445	27	36	46
Viscosity Index (VI)	ASTM D2270	>160	>160	>160
Pour Point °F (°C)	ASTM D97	-40 (-40)	-40 (-40)	-40 (-40)
Flash Point °F (°C)	ASTM D92	>500 (260)	>515 (268)	>527 (275)
Gear Lubrication, FZG Load Stage	DIN 51354	13+	13+	13+
Water Separation, min	ASTM D1401	25	25	25
Copper Corrosion	ASTM D4048	1A	1A	1A
Rust Test, A & B	ASTM D665	Pass	Pass	Pass
Readily Biodegradable (meaning>60%)		Pass	Pass	Pass
Biodegradability, %	OECD 301B	>60	>60	>60
Minimally Toxic		Pass	Pass	Pass
Algae (EC 50), 72 hr, mg/L	OECD 201	>18,000	>18,000	>18,000
Daphnia (EC 50), 48 hr, mg/L	OECD 202	>11,000	>11,000	>11,000
Fish (LC 50), 96 hr, mg/L	OECD 203	>23,000	>23,000	>23,000
Not Bioaccumulative (Calculated value as per EPA standard)		Pass	Pass	Pass
Bio-based Content, %	ASTM D6866	>78	>78	>78

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.

- 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)
- Meets AGMA 9005-E02 Industrial Gear Specification

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

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