



Biodegradable grease for open gear lubrication.

APPLICATIONS

Biodegradable water resistant grease.

Open gears, cables and chains under high load.

FEATURES AND BENEFITS

BIO OG+ is an extreme pressure, adhesive and biodegradable grease dedicated for the lubrication of open gears and chains working in the presence of water.

BIO OG+ is also suitable for environments where water contamination is common and when a lubricant with a wide temperature range is required.

BIO OG+ is an ultimately biodegradable grease, with low toxicity to aquatic organisms and contains more than 50% of renewable raw materials.

SPECIFICATIONS AND APPROVALS

✓	EAL - 2013 Vessel General Permit (VGP)	✓	ISO 6743-9: L-XBBIB 1
✓	DIN 51502: OGP1E-20	✓	OECD 301 B >60%

TECHNICAL DATA : BIO OG+

CHARACTERISTICS	METHODS	UNITS	TYPICAL VALUES*
Thickener	—	—	Calcium
Base oil type	—	—	Ester
NLGI Grade	ASTM D 217	grade	0 - 1
Color / Appearance	Visual	—	Yellow / Adhesive
Operating temperature range	—	°C	- 20 to +90
Penetration at 25°C	ASTM D 217	0.1 mm	330 - 360
EMCOR, distilled water	ISO 11007	Rating	0/0
4-ball weld load	ASTM D 2596	kgf	500
Dropping point	IP 396/ISO 2176	°C	> 150
Kinetic viscosity of the base oil at 40 °C	ISO 3104	mm ² /s	990

*The specifications above are for illustrative purposes and communicated for information only.

CUSTOMER BENEFITS

✓	BIO OG+ meets the most challenging marine requirements.
✓	Forms a durable lubrication film resulting in reduction of maintenance and down-time costs.
✓	Remarkable load resistance thanks to its high extreme pressure and anti-wear properties.
✓	Excellent water resistance and good anti-corrosion performance, even under sea water.
✓	Low environmental impact : biodegradable, low toxicity to aquatic organisms.

GENERAL RECOMMENDATIONS

COMPATIBILITY

Please consult your Total Marine Lubrication Engineer should you have any questions.

STORAGE

This product should be stored under cover in clean, dry conditions and protected from frost.

Recommended storage temperature range is 5°C to 50°C.

Drums that are stored on deck should be raised on pallets and covered to protect from the elements.

Always check regularly for leakage.

COMPLIMENTARY PRODUCTS AND SERVICES

✓	DiagomarPlus – Laboratory based used oil analysis program.
✓	Tech'Care – Suite of onboard testing kits.
✓	Technical Expertise & Support – Total Lubmarine engineers are on hand at worldwide locations to assist with lubrication concerns.
✓	Lube-On-Ship – Visualize your lube oils needs aboard Total Lubmarine's innovative virtual vessel.

Total Lubmarine / 00-00-2021 / BIO OG+

This lubricant used as recommended and for the application for which it has been designed does not present any particular risk. A material safety data sheet conforming to the regulations in can be obtained via your Total Lubmarine technical advisor or from sdstotalms.total.com

