



High performance biodegradable lubricant for enclosed gears.

APPLICATIONS

Environmentally Acceptable Lubricant (EAL) as per the US 2013 Vessel General Permit (VGP).

CARTER BIO is designed to replace mineral gear oils for enclosed gears and bearing lubrication.

FEATURES AND BENEFITS

CARTER BIO is designed for use when incidental spillage in environmentally sensitive areas may occur.

CARTER BIO has very good extreme pressure properties and a high scuffing load capacity ensuring good protection of gears operating under high load.

CARTER BIO ensures a high corrosion protection, confirmed with sea water contamination.

SPECIFICATIONS AND APPROVALS

✓	US Vessel General Permit Compliant	✓	WÄRTSILÄ
✓	HHI thrusters	✓	ZF PROPULSION
✓	SCANA		

TECHNICAL DATA : CARTER BIO 320

CHARACTERISTICS	METHODS	UNITS	TYPICAL VALUES*
Density at 15°C	ISO 3675	kg/m ³	1.015
Kinematic viscosity at 40°C	ISO 3104	mm ² /s	313.5
Kinematic viscosity at 100°C	ISO 3104	mm ² /s	33.06
Viscosity index	ISO 2909	–	147
Flash Point (OC)	ISO 2592	°C	294
Pour Point	ISO 3016	°C	- 36
FZG A/8, 3/90 failure stage	DIN 51354-2	–	> 13

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

CUSTOMER BENEFITS

✓	CARTER BIO combines good lubrication properties and a high oxidation stability.
✓	CARTER BIO provides lubrication advantages at both high and low temperatures compared to mineral oils.
✓	The very high viscosity index and shear stability of CARTER BIO ensures a high lubricating film thickness at high temperatures.
✓	The lower pour point and the low temperature viscosity will ensure a better start up in cold operating environments.

GENERAL RECOMMENDATIONS

COMPATIBILITY

Compatibility should be checked.

Please consult your Lubmarine 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.



EU Ecolabel: FR/27/002

Total Lubmarine / 00-04-2021 / CARTER BIO 320

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

