

# BIO OG PLUS



Grease



TOTAL

**Biodegradable grease for open gear lubrication.**

## APPLICATIONS

**Environmentally sensitive applications**

**Open gears, cables and chains under high load**

- **BIO OG PLUS** is an extreme pressure, adhesive and biodegradable grease dedicated for the lubrication of open gears and chains working under water, also environments where water contamination is common and when a lubricant with a wide temperature range is required along with high loads.
- **BIO OG PLUS** is developed for systems with very high environmental constraints.
- Always avoid contamination of the grease by dust and/or dirt when applying.

## SPECIFICATIONS

- **BIO OG PLUS** is > 60% biodegradable following OECD 301B
- **BIO OG PLUS** is formulated in accordance with VGP EAL (Vessel General Permit – Environmentally Acceptable Lubricant)
- ISO 6743-9: L-XBBIB 1
- DIN 51502: OGP1E-20

## ADVANTAGES

**Good adhesiveness**

**High load carrying properties**

**Water resistance**

**Biodegradable**

- **BIO OG PLUS** meets the most challenging industrial requirements:
- Excellent mechanical stability and good adhesiveness;
- 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;
- Non toxic towards aquatic environment and highly biodegradable.

TYPICAL CHARACTERISTICS	METHODS	UNITS	BIO OG PLUS
Soap/thickener	-	-	Calcium
Color	Visual	-	Beige
Appearance	Visual	-	Adhesive
NLGI grade	ASTM D 217	grade	1
Operating temperature range	-	°C	from -20 to 90
Penetration at 25 °C	ASTM D 217	0.1 mm	310-340
Four ball weld load	ASTM D2596	Kgf	500
Dropping point	ISO 2176	°C	150
EMCOR, distilled water	ISO 11007	rating	0/0
EMCOR, synthetic sea water	ISO 11007	rating	2/2
Base oil type	-	-	ester
Kinematic viscosity of base oil mix at 40 °C	ISO 3104	mm <sup>2</sup> /s	990
Water spray off (40 psi / 38°C)	ASTM D 4049	%	42

Above characteristics are mean values given as an information.

### Recommendations:

- Store the product at temperatures between 0 and 35°C.
- **Shelf life: 24 months** from date of manufacture (unopened).

TOTAL LUBRIFIANTS  
INDUSTRIE  
25-11-2016  
BIO OG PLUS  
1/1



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 use in the E.C. can be obtained from your local commercial adviser or down loaded from [www.quick-fds.com](http://www.quick-fds.com).