



Biomultis EP 1

DESCRIPTION

High-performance Extreme Pressure biodegradable and biosourced Lithium/Calcium grease, with outstanding low temperature resistance, and Ecolabel certification.



APPLICATIONS

Biomultis EP 1 is designed for equipment operating in environmental sensitive areas like marine, agriculture, public works, forest, inland and coastal shipping (locks)...

Biomultis EP 1 is specially designed for use in rudder carrier bearings where a NLGI 1 grease is requested.

It also a multipurpose grease, especially formulated for automatic lubrication system delivering grease to bearings, slide bearings or universal joints...

Biomultis EP 1 is adapted for the lubrication of applications operating in wet, corrosive and dusty conditions.

Biomultis EP 1 is developed for loss lubrication with very high environmental constraints.

Biomultis EP 1 has the highest Ecolabel certification : TLL (Total Loss Lubrication).

RECOMMENDATIONS

Biomultis EP 1 is certified ECOLABEL TLL - Total Loss Lubrication

Always avoid contamination of the grease by dust and/or dirt when applying. Preferably use a pneumatic pump system or cartridges.

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. is obtainable via your commercial adviser www.quick-fds.com.

TotalEnergies Lubricants

SA 552 006 454 RCS Nanterre - France

SPECIFICATIONS

Environmentally Acceptable Lubricant (EAL) for the 2013 Vessel General Permit (VGP)

TLL ECOLABEL certification

- ISO 6743-9: L-XEDEB 1
- DIN 51502: KP1N-50

ADVANTAGES

Biomultis EP 1 has been formulated with **synthetic esters** giving extra performance at low temperature. It can replace a wide range of greases, allowing stock rationalization and simplification of maintenance.

Forms a durable lubrication film with a good resistance to water and variation of temperature resulting in reduction of maintenance and down-time costs.

Biomultis EP 1 does not contain lead, or other heavy metals considered harmful to human health and the environment.

Biomultis EP 1 is an ultimately biodegradable grease, with low toxicity to aquatic organisms and contains more than 50% of renewable raw materials.

TYPICAL CHARACTERISTICS

PROPERTIES	METHODS	UNITS	Biomultis EP 1
Soap/thickener		-	Lithium / Calcium
Base oil type		-	Synthetic Esters
NLGI Grade	ASTM D 217/DIN 51 818	-	1
Color	Visual	-	Brown
Appearance	Visual	-	Smooth
Operating temperature range	-	°C	-50 à 140
Penetration at 25°C	ASTM D 217/DIN 51 818	0.1 mm	310-340
Flow pressure 1400 mbar	DIN 51805	°C	<-50°C
4-ball weld load	ASTM D 2596	kgf	315
4-ball wear	ASTM D 2266	mm	0,6
Anti-rust performance SKF-EMCOR	DIN 51 802/IP220/NFT 60-135/ ISO 11007	Rating	0 - 0
Dropping point	IP 396/DIN ISO 2176	°C	>160
Kinematic viscosity of the base oil at 40°C	ASTM D 445/DIN 51 562-1/ISO 3104/IP71	mm ² /s (cSt)	150
Biodegradability	OECD 301 B	%	>80

Above characteristics are mean values given as an information.

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Biomultis EP 1 Certification – VGP Compliance

Date of last Rev. October 2023

Revision number: 1

TotalEnergies Lubrifiants certifies that Biomultis EP 1 is an Environmentally Acceptable Lubricant (EAL) according to the definitions and requirements of the U.S. Environmental Protection Agency (EPA) 2013 Vessel General Permit (VGP).

VGP Section 2.2.9 states that all vessels trading on US ports must use an EAL in all oil and greases to sea interfaces, unless technically infeasible. “Environmentally acceptable lubricants” means lubricants that are “biodegradable” and “minimally-toxic” and are “not bio-accumulative” as defined in Appendix A of the permit.

BIODEGADABILITY

The VGP definitions of “Biodegradable” include grease formulations that contain at least 75% by weight of a constituent substance or constituent substances that give a minimum test result of 60% according to OECD 301B. The 25% of the formulation that need not meet the above biodegradability requirements may be inherently biodegradable or nonbiodegradable (but not bioaccumulative). Acceptable test methods to demonstrate inherent biodegradability include >20% according to OECD 301B. In order to comply with the 2013 VGP biodegradability / bioaccumulation requirement, it is necessary to consider the constituent substances.

NON-BIOACCUMULATION

Only stated substances present above 0.10% shall be assessed. As stated above, the assessment of bioaccumulation only applies to non-biodegradable constituent substances.

MINIMALLY TOXIC

The VGP definitions for “Minimally-Toxic” greases include achieving acute toxicity results of at least 1000 mg/L according to OECD 201, 202, and 203 (Algae, Daphnia and Fish).

Following testing by our supplier and according to the Lubricant Substance Classification List of the European Commission, **Biomultis EP 1** and its components meet all the above requirements.

Maxime ORENGA-CASTENETTO
Grease product manager

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