

DESCRIPTION

BIO ADHESIVE PLUS is an exclusive biodegradable calcium grease developed by the Total research Center.

APPLICATIONS

- **BIO ADHESIVE PLUS** has been designed to cope with lubrication under difficult conditions of temperature or humidity.
- **BIO ADHESIVE PLUS** is an adhesive biodegradable grease specially formulated to lubricate metal cables, wire ropes and winches.
- **BIO ADHESIVE PLUS** was developed for once-through lubrication in situations where there are environmental constraints.
- **BIO ADHESIVE PLUS** is easily applied by hand with a brush or other adapted tool.

PROPERTIES

- Thanks to its innovative formula **BIO ADHESIVE PLUS** meets the more stringent requirements of the dedicated marine application.
- Excellent adhesion on wire ropes and cables.
- Extraordinary water resistance and anti-corrosion properties.
- **BIO ADHESIVE PLUS** does not contain lead or heavy metals considered harmful to human health and environment.
- **BIO ADHESIVE PLUS** is ultimately biodegradable (OECD 301B > 60%).
- Miscible with most conventional greases.

SPECIFICATIONS

- ISO 6743-9: L-XBBA-1
- DIN 51502: ME1E-20

CHARACTERISTICS

CHARACTERISTICS	METHODS	UNITS	BIO ADHESIVE PLUS
Soap/thickener		-	Calcium
NLGI Grade	ASTM D217/DIN 51818	-	1
Color, visual		-	Brown
Appearance, visual		-	Smooth
Operating temperature range		°C	- 20 to 90
Penetration at 25°C	ASTM D217 / DIN51818	0.1 mm	310 - 340
Anti-rust performance SKF-MECOR	ISO11007 (distilled water)	Rating	0 / 0
Anti-rust performance SKF-MECOR	ISO11007 (sea water)	Rating	1 / 1
Dropping point	ISO 2176	°C	> 145
Adherence Test under Water pressure at 40 psi	ASTM D 4049	%	43
Kinematic viscosity of the base oil at 40°C	ASTM D 445/DIN 51562-1/ ISO3104	mm ² /s (cSt)	320
Biodegradability	OECD301B	%	> 60

Characteristics of this chart are indicative typical values

HANDLING, HEALTH AND SAFETY

BIO ADHESIVE PLUS grease contains synthetic base oil with additives.

In normal conditions of use, these lubricants present no particular toxic hazard.

All lubricants, of any kind, should always be handled with great care, particularly avoiding any contact with the skin.

Prevent any risk of splashing, and keep away from combustible materials.

Store under cover and away from any risk of contamination.

A safety data sheet complying with current legislation is available on [www. quickfds.com](http://www.quickfds.com) or www.lubmarine.com.

The values shown above are typical values at the date of publication. TOTAL Lubmarine reserves the right to change these typical values without prior notice.



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