

Multi-Bio EP Grease

A multi-purpose, biodegradable, water resistant rust preventative, extreme pressure lubricating grease

DESCRIPTION

Multi-Bio EP Grease is a soft, biodegradable grease incorporating non-toxic solid lubricants, extreme pressure additives and a blend of anti-oxidants and corrosion inhibitors, combined to provide highly effective lubrication with excellent corrosion protection to metal surfaces. Formulated to reduce your maintenance and down time costs and the number of greases currently in use.

TYPICAL PHYSICAL PROPERTIES

Test	
Appearance	Off white adhesive grease
NLGI Classification	1
Thickener	Calcium soap
Worked Penetration (IP50)	310 – 340
Base oil type	Blend of biodegradable oils
Thickener	Calcium soap
Timken OK load (IP 326)	20 kg (45lb)
Four ball welding load (IP 239)	800 kg
Operating temperature range	-30°C to + 110°C

APPLICATION

Multi-Bio EP Grease is extremely adhesive, making it suitable for a wide range of applications in very wet and aggressive environments. Suitable for the lubrication of heavy loaded sliding surfaces, jack-up legs and bulldog gears, cranes, crane hooks, heavy duty bearings, sheaves, BOP transport guides, slew rings, open gears and pipe rackers. The de-watering properties of Multi-Bio EP Grease make it very suitable for applications to wet slides and surfaces.

ADVANTAGES

- 1) Biodegradable – environmentally acceptable
- 2) CEC-L-33-F-94 greater than 80% biodegradable
- 3) Multi functional applications
- 4) Reduces the number of greases currently in use
- 5) Dewateres and can be applied to wet surfaces
- 6) Very resistant to water wash off
- 7) Anti-gauling extreme pressure lubrication
- 8) Corrosion resistance
- 9) Easy to apply in all weathers

All data given in this Product Data Sheet are typical of this material. It does not however constitute a specification. We reserve the right to modify products without prior notice. All products, services and information supplied are provided upon the terms of our standard Conditions of Sale from time to time in force.

Houghton plc

Beacon Road Trafford Park Manchester M17 1AF

Tel +44(0) 161 874 5000

Fax +44(0) 161 877 9764

E-mail enquiries@houghton.co.uk



Measurement of the coefficient of friction of friction between steel and Inconel surfaces

As part of the design requirement for a riser hang-off system, the coefficient of friction between a mild steel and Inconel surface is required. Two base-plates of coated mild steel (Green & Grey), an Inconel overlaid steel and two candidate greases were tested - Grease "A" and Multi-Bio EP Grease.

Friction measurements have been conducted by Aberdeen University Engineering Services, on a standard test rig using a 5 tonnes loading equivalent to 2000 psi.

Material combination	Coefficient of friction
Inconel/Green plate, dry	0.15
Inconel/Green plate/brine	0.15
Inconel/Green plate/Grease A	0.08
Inconel/Green plate/Grease A/brine	0.08
Inconel/Green plate/Multi-Bio EP	0.03
Inconel/Green plate/Multi-Bio EP/brine	0.03
Inconel/Grey plate, dry	0.11
Inconel/Grey plate/brine	0.10
Inconel/Grey plate/Grease A	0.10
Inconel/Grey plate/Grease A/brine	0.10
Inconel/Grey plate/Multi-Bio EP Grease	0.05
Inconel/Grey plate/Multi-Bio/brine	0.05
Mild steel/Green plate	0.19
Mild steel/Green plate/brine	0.18
Mild steel/Green plate/Grease A	0.13
Mild steel/Green plate/Grease A/brine	0.13
Mild steel/Green plate/Multi-Bio EP	0.06
Mild steel/Green plate/Multi-Bio EP/brine	0.06
Mild steel/Grey plate	0.17
Mild steel/Grey plate/brine	0.17
Mild steel/Grey plate/Grease A	0.09
Mild steel/Grey plate/Grease A/brine	0.08
Mild steel/Grey plate/Multi-Bio EP Grease	0.04
Mild steel/Grey plate/Multi-Bio EP/brine	0.04

CONCLUSION

The Inconel couples have a lower coefficient of friction than the mild steel but insertion of the lubricant Multi-Bio EP Grease reduces the value to a similar level. Multi-Bio EP Grease appears better for reducing the value of coefficient of friction showing a 50% reduction over Grease "A" for the same friction couple.

STORAGE

Do not store in open or unlabelled containers.
No special precautions needed beyond normal care and good hygiene practices.

HEALTH & SAFETY

Health and Safety Data Sheets are supplied to customers to comply with Section 6 of the Health and Safety at Work Act 1974 and should be closely studied prior to handling or use of the product. Copies are available from your Technical Health and Safety Officer. Various other advisory publications are available from the Health and Safety Executive and Her Majesty's Stationery Office.

31490-4
01/05

All data given in this Product Data Sheet are typical of this material. It does not however constitute a specification. We reserve the right to modify products without prior notice. All products, services and information supplied are provided upon the terms of our standard Conditions of Sale from time to time in force.

Houghton plc
Beacon Road Trafford Park Manchester M17 1AF
Tel +44(0) 161 874 5000
Fax +44(0) 161 877 9764
E-mail enquiries@houghton.co.uk



 **HOUGHTON**
Fluid Technology & Service Worldwide