

# Technical Data

## BIOGEN® TUFLUBE

### Heavy Duty Biodegradable Jacking and Open Gear Grease

#### Description

ROCOL® BIOGEN TUFLUBE is an extreme heavy duty grease, designed to protect heavily loaded, slow moving mechanisms in the wettest and most corrosive conditions. It is the ideal lubricant to protect jacking and open gear systems in marine, offshore and freshwater environments, where the protection of critical assets is of utmost importance.

BIOGEN TUFLUBE is rated Classification 'E', the highest classification level of the HOCNF system, therefore permitting use in the North Sea. It also meets the requirements of the 2013 Vessel General Permit (VGP).

#### Applications

- Jacking Systems
- Open Gears
- Rollers
- Slew Rings
- Cantilevers
- Booms
- Winches
- Joints & Couplings
- Penstocks, sluice gates, winding gears or locks
- Water treatment facilities

#### Approvals

HOCNF Classification 'E': Certified for use in the North Sea

VGP Compliant: Biodegradable, minimally toxic and non-bioaccumulative. Can be used in the waters of the United States of America

#### Features & Benefits

- Outstanding corrosion protection, physical and chemical protection against pitting and corrosion.
- Protects against metal wear
- Extremely adhesive, a blend of hi-tac boosters ensures staying power, can even be applied when wet or submerged.
- Tough, tenacious, self-repairing film which maintains a lubricant film on the surface longer than conventional lubricants
- Very wide temperature range of -60°C to +170°C. Ideal for hot and cold climates.
- Outstanding load carrying capacity, able to cope with extremely high loads with a weld load of 700Kg.

#### Directions For Use

BIOGEN TUFLUBE should be stored in its unopened original container.

For best practice, storage temperature of should be controlled to between +1°C and +40°C.

Shelf life is 3 years from date of manufacture

The minimum application temperature for BIOGEN TUFLUBE is 0°C.

For best results apply to clean gearing.

Can be applied by hand or automatic lubrication equipment

#### Further Information

For pack sizes, part codes and safety data sheets please visit [www.rocol.com](http://www.rocol.com) or get in touch with our customer service team who will be happy to help: [customer.service@rocol.com](mailto:customer.service@rocol.com)

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### Heavy Duty Biodegradable Jacking and Open Gear Grease

Property	Test Method	Result
Appearance	Visual	Beige grease
Base Fluid Type	N/A	Vegetable/Synthetic
NLGI No.	IP 50 - ASTM D217	2
Base Fluid Viscosity at 40°C	IP71	95 cSt
Base Fluid Viscosity at 100°C	IP71	12.6 cSt
Thickener	N/A	Proprietary
Drop Point	IP 396	Non-melting
Operating Temperature Range	N/A	-60°C to +170°C
Solids	N/A	Blend of high load carrying solids
4-Ball Weld Load	IP239	700kg
Copper Corrosion Test (24hrs at 100°C)	IP 112 – ASTM D130	1B
Oil Separation (24hrs at +100°C)	IP 121	1%

Values quoted above are typical and do not constitute a specification.

Issue 2 Date: 11/20

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