

Fully VGP  
2013 compliant

**BRIDON**

**eco**  
**BRILUBE**  
service dressing lubricant

# Introducing the future of rope lubricant

A complex engineered lubricant compliant with VGP 2013 with no loss in performance. Compatible with existing manufacturing lubricants, applied by spray or pump system.

Performance tested on ropes in fatigue, temperature, wash off resistance and corrosion.

**Technically feasible  
with no loss in performance**

**BRIDON  
APPROVED**  
A high performance lubricant developed & tested by a rope manufacturer, specifically for offshore rope applications



EU Ecolabel : UK/027/016



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## Background

In March 2013, the US Environment Protection Agency (EPA) published a new version of the

**Vessel General Permit (VGP)** which applies to all vessels entering US waters from 19th December 2013. VGP 2013 requires that “all vessels must use **Environmentally Acceptable Lubricants (EAL)** in all oil to sea interfaces, unless technically infeasible” (ref. VGP 2013, pg 47 of 194).

EAL lubricants are required to be: “**bio-degradable**”, “**minimally toxic**” and “**non bio-accumulative**”.

## Commercially Available EAL Lubricants

There are a number of VGP compliant products available as rope dressing lubricants, however to our knowledge current EAL lubricants for the preservation of wire rope have not progressed to the point where they demonstrate equal performance to existing wire rope lubricants used on rope.

In 2014, Bridon evaluated certified EAL products for use with wire rope to find a technically feasible EAL build lubricant and a compatible EAL service dressing. The aim was to evaluate the performance difference between ropes with standard lubricant and the ropes with the EAL lubricants.

Bridon completed laboratory tests to compare properties and performance of standard and EAL lubricants. The lubricant evaluation tests included hot salt spray testing, oil bleed in sea water, water wash out properties etc. **Lubricant comparison testing showed a significant reduction in corrosion protection and poor water wash off resistance** compared to the standard lubricants currently used.

Bridon manufactured multi-strand ropes with EAL lubricant applied in both stranding and closing operations. The EAL's had significantly lower bend fatigue performance and in hyperbaric testing of ropes demonstrated oil bleed when subjected to pressure in excess of 150 bars, equivalent to 1500m water depth.

The conclusion was that **commercially available EAL lubricants evaluated were not technically feasible** as a lubricant for wire rope.

## Bridon Development of EAL Lubricant 2015

To address the short comings of the commercially available lubricants Bridon developed a complex engineered viscoelastic lubricant containing a hybrid grease and synthetic polymer technology specifically for wire rope, which outperforms standard lubricants in application and conforms to VGP2013 demonstrated through ECO Label Certification.

In lab testing the new Brilube ECO surpassed the performance of current non EAL lubricants in:

- ✓ Water Wash Off Resistance – Improved resistance to water wash off
- ✓ Corrosion Protection – New corrosion inhibitor provides a coating on the wire and surpasses the requirements of ASTM B117
- ✓ Temperature Performance – Significantly higher drop point and lower break point provides flexibility in operation from Arctic to Tropical climates and is suitable for use in AHC systems.
- ✓ ECO Label Certification – Compliant with the requirements of VGP2013

*\*See Technical Data Sheet for further information on product performance and characteristics*

Bridon's conclusion from the extensive development and testing is that **EAL lubricant is now technically feasible in wire rope** through the use of **Brilube ECO**. According to VGP 2013 regulations, an exception can only apply if the use of EAL lubricant is “technically infeasible”. Now with the development of Brilube ECO a product exists that meets both the requirements of VGP 2013 and the rope manufacturers specifications for that equipment.

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