

Wire Rope Lubricants



Effective maintenance for your wire rope



The Important function of Lubricants



Wire ropes used in marine applications need proper maintenance during their service life, in order to perform well and efficient. Lubrication is a very important task of wire rope users, which can protect from weather effects (rust and deterioration) and increase the operational life of wire ropes.

What does a lubricant do?

- **Reduces the friction coefficient among the individual wires when moving internally during operation.**
- **Protects from moisture which normally causes oxidation and corrosion.**

Efficient application of lubricants upon wire ropes is normally performed with the use of a lubricator equipment, so the lubricant may penetrate the internal construction of the wire rope. A specially designed Groove Cleaner for each wire rope size & construction removes any dirt/grit from the valleys between the strands, so that the rope enters the lubricator body clean and ready to be greased. The grease will seal the wire rope internally and will keep away the unwanted moisture.



Pressure lubricator is recommended for efficient application of grease

The lubricator system provides a continuous stream of atomized oil. The lubricant is inserted into the wire rope structure under control, so the user can set the effective drip-rate of the oil upon the wire rope. This method is the best practice for lubricating while also cost-saving due to specific adjustment of the needed grease and shorter labor times.



VGP Compliant Lubricants

The Vessel General Permit (VGP) regulation indicates that every oil-to-sea interface has to use an Environmentally Accepted Lubricant (EAL). This ensures that the used product is:

- **Biodegradable** - a lubricant is "readily biodegradable" if it is more than 60% biodegraded in 28 days.
- **non bio-accumulative** Bioaccumulation is the build-up of foreign chemicals within the tissues of a living organism over time.
- **minimally toxic** - It is measured by the concentration in parts per million or milligrams per liter of lubricant that affects specific test species.

THE FEATURES OF EFFECTIVE LUBRICANT

Operational Temperature Range

The proper lubricant for marine wire ropes must have resistance to constantly changing temperature conditions. Conventional greases that do not perform well in various temperatures, may drip easily in hot climates leaving the wire exposed. A wide and effective operational range is from -25°C up to $+140^{\circ}\text{C}$.

Washing off Resistance

The ability of the grease to resist washing off and remain upon the wire rope when subjected to wet conditions (i.e. rain, sea etc.), is usually measured acc. to ASTM D1264. Values below 2% are indicated for good performance of the grease in terms of washing off resistance.

Corrosion Resistance

Determining the resistance against corrosion is essential for the good maintenance and long service life of the wire ropes. Salt spray testing has long been the standardized corrosion test method and indicates the time period at which there is initial appearance of corrosion products (rust).

Internal viscosity of semi-fluid grease -

This feature represents the lubricant's capability to penetrate easy into the wire rope structure. According to the NLGI (National Lubricating Grease Institute), the standardized grade of **0 to 000** is less stiff than others and is beneficial for wire ropes.

