



A range of high performance
**Wire Rope
Lubricants**



Introduction

Rope-Tek™ WRD is a range of high-performance lubricants, specifically designed to lubricate and protect steel wire ropes. Each product is formulated from high-performance base oils and thickeners, and contains an advanced additive system that minimises friction and wear, delivering outstanding corrosion protection.

Global specialists in high-performance lubricants

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Steel wire ropes are complex in construction and are subject to arduous operating conditions. Movement such as loading and unloading of the rope, bending and flexing over sheaves and pulleys, creates high load points where wires and strands cross over each other. This can result in fretting wear and corrosion – reducing the life of the rope. The high load carrying solids contained in Rope-Tek™ WRD products form a low friction barrier between the metal surfaces, minimising frictional contact and wear.

Due to the vastly different environments that wire ropes have to operate in, Metalube® has a comprehensive range of wire rope lubricants to provide the right product for every condition and situation.

The following table illustrates the main features and benefits of using Rope-Tek™ products:

Features and benefits

- Excellent resistance to moisture and oxidation protects against corrosion induced failure
- High load carrying – minimises friction and wear between wires and strands
- Extreme resistance to water prevents the lubricant being wiped off from the rope

Product	Description
WRD 5	An inorganically thickened, non-melting NLGI 1/2 multi-purpose wire rope dressing with graphite and high load white solids
WRD 10	A pseudoplastic wire rope dressing using sub-micronic solid lubricants to produce a translucent brown grease.
WRD 15	A solvent reduced version of WRD10 which can be applied to the rope using hand held or back-pack spray equipment
WRD 20	A pseudoplastic wire rope dressing using graphite to improve the general load carrying ability to produce a black grease.
WRD 30	An NLGI 2 wire rope dressing that uses an inorganic non-melting thickener and a synthetic base oil for extreme high and low temperatures.
WRD 40	A Vessel General Permission (VGP) compliant, biodegradable, non-toxic to aquatic organisms NLGI 2 wire rope dressing.

Pack sizes

18kg pail, 180kg drum

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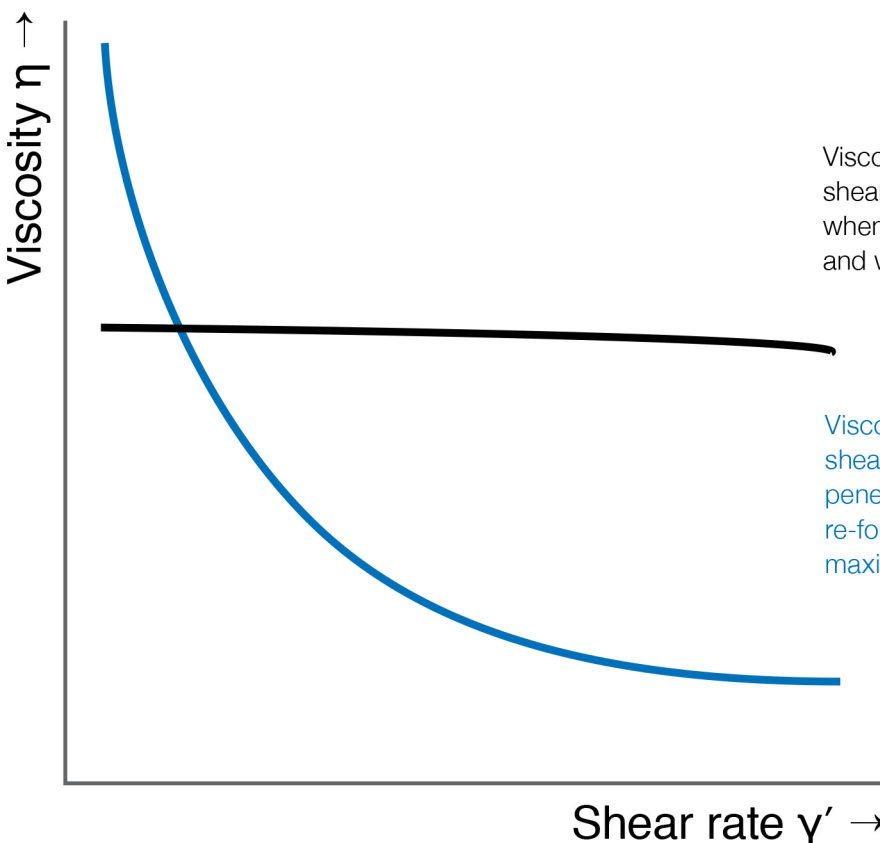
What is a Pseudoplastic grease?

The majority of wear and corrosion of a wire rope occurs in the core. This is hidden away from view and difficult to reach through the outer strands. Therefore an effective rope lubricant must have excellent penetration properties to deliver protection in this vital area.

This is best achieved by low-viscosity materials that have little resistance to flow. However, low-viscosity products have little resistance to wash-off caused by rain or water immersion – for this, a tenacious high-viscosity material is required. These competing and opposite demands often result in a compromise product.

Rope-Tek™ WRD does not compromise. By utilising a novel thickener system that exhibits pseudoplastic behavior, Rope-Tek™ WRD provides both excellent penetration and wash-off protection.

Pseudoplastic behavior



Viscosity remains constant regardless of shear rate. Compromise must be made when selecting balance of penetration and wash-off protection properties.

Viscosity dramatically reduces when shear is applied allowing maximum penetration during application. Structure re-forms instantly after application giving maximum wash-off resistance.

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Technical data (typical values)

Property	WRD 5	WRD 10	WRD 15	WRD 20	WRD 30	WRD 40
Appearance	Grey/black grease	Translucent brown grease	Translucent brown fluid	Grey/black grease	Grey/black grease	Beige/white grease
Temperature	-40°C > +130°C	-40°C > +130°C	-40°C > +130°C	-40°C > +130°C	-60°C > +180°C	-40°C > +130°C
NLGI	1/2	1	000	1	1/2	1/2
Worked penetration (IP50)	300	315	400	310	280	280
Salt spray (ASTM B-117)	>500hrs	>500hrs	>500hrs	>500hrs	>500hrs	>500hrs
4-ball weld load (IP239)	355kg	250kg	250kg	355kg	450kg	250kg
Drop point (IP132)	>300°C	>300°C	>300°C	>300°C	>300°C	150°C

*Note: Results from WRD15 relate to the applied film

Product Selection Guide

Property	WRD 5	WRD 10	WRD 15	WRD 20	WRD 30	WRD 40
Manual	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓	✓✓
Pressure applicator	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓
Fluid version for spray packs			✓✓✓			
Environmentally friendly						✓✓✓
Very heavily loaded ropes	✓✓✓	✓✓	✓✓	✓✓✓	✓✓✓	✓✓
Water immersion	✓✓	✓✓	✓✓	✓✓	✓✓✓	✓✓✓
Ultra-low Temp	✓✓	✓✓	✓✓	✓✓	✓✓✓	✓✓
Ultra-high Temp	✓✓	✓✓	✓✓	✓✓	✓✓✓	✓

Storage

Store out of direct sunlight. Storage temperature should be controlled to between 5°C and 35°C.

The product information in this publication is based on knowledge and experience at the time of printing. There are many factors outside our control or knowledge which affect the use and performance of our products, for which reason it is given without responsibility. Issue date: 22/09/15

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