



Rope-Tek™ WRD

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 contain an advanced additive system that minimizes friction and wear and delivers outstanding corrosion protection.

Steel wire ropes are complex in construction and are subjected 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 minimizing frictional contact and wear.

Due to the vastly different environments that wire ropes have to operate in, Metalube have 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 minimizes friction and wear between wires and strands
- Extreme resistance to water prevents the lubricant being wiped off from the rope

Global specialists in high-performance lubricants

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Company registration number: 2263118; Company registered in England VAT registration number GB108244927000



Cert No 2367QM8001



Rope-Tek™ WRD

Product Range

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-micron 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 containing graphite to improve the load carrying ability
WRD 30	An NLGI 2 wire rope dressing that uses an inorganic non-melting thickener and a synthetic base oil for extreme high and extreme low temperatures

What is a Pseudoplastic grease?

The majority of wear and corrosion of a wire rope occurs in the core. This 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 10 and 20 do not compromise. By utilizing a novel thickener system that exhibits pseudoplastic behavior Rope-Tek WRD 10 and 20 provide both excellent penetration and wash-off protection.

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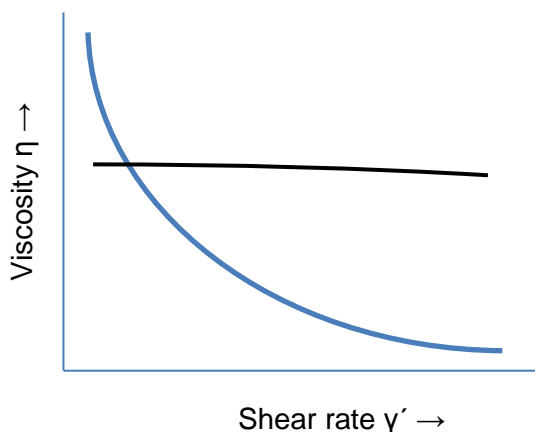


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Pseudoplastic behavior



Typical “Newtonian” rheology:

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

Pseudoplastic rheology:

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

Technical data (typical values)

Property	WRD5	WRD10	WRD15	WRD20	WRD30
Appearance	Grey/black grease	Translucent brown grease	Translucent brown grease	Grey/black grease	Grey/black grease
Temperature	-50°C to +130°C	-50°C to +130°C	-50°C to +130°C	-50°C to +130°C	-60°C to +180°C
NLGI	2	1	1	1	1/2
Penetration (IP50)	290	315	315	310	300
Salt Spray (ASTM B-117)	>1000hrs	>500hrs	>500hrs	>500hrs	>500hrs
4 Ball weld load (IP239)	400kg	280kg	280kg	400kg	450kg
4 Ball wear (IP239)	0.75 mm	0.69 mm	0.69 mm	0.74 mm	0.54 mm
Drop Point (IP132)	>300°C	>300°C	>300°C	>300°C	>300°C

*Note: Results for WRD 15 relate to the applied dry film.

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Product Selection Guide

Product	WRD5	WRD10	WRD15	WRD20	WRD30
Manual	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓
Pressure applicator	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓
Spray application			✓✓✓		
Environmentally friendly					
High load ropes	✓✓✓	✓✓	✓✓	✓✓✓	✓✓✓
Water immersion	✓✓✓	✓✓	✓✓	✓✓	✓✓✓
Ultra-Low Temp	✓✓	✓✓	✓✓	✓✓	✓✓✓
Ultra-high Temp	✓✓	✓✓	✓✓	✓✓	✓✓✓

Pack sizes

18 Kg pail, 180kg drum

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.

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