

## Description

RUCO®-FIL NWF is a high performance water repellent sewing thread lubricant, a preparation of polysiloxane, waxes and additives. RUCO®-FIL NWF is suitable as a sewing thread lubricant and water repellent finish for sewing threads made of PES, PA and their blends by continuous application through lick-roller or metering pump.

## Performance highlights

- distinctly lower friction values than conventional fluorocarbon resin finishes
- good sewing behaviour
- good heat protection and needle cooling during sewing
- excellent water repellent and anti-wicking effect
- suitable for white or optically brightened yarns
- long-term running stability
- heat-setting at low temperatures possible
- free of halogenated compounds and alkylphenol ethoxylates (APEO)

## Product characteristics

Appearance: Milky-white viscose dispersion

Technology: Polysiloxanes, waxes and additives

Density: 0,95 g/cm<sup>3</sup>

## Performance overview

Anti-wicking test- Rudolf method - 100% PES

### 8 % RUCO®-FIL NWF

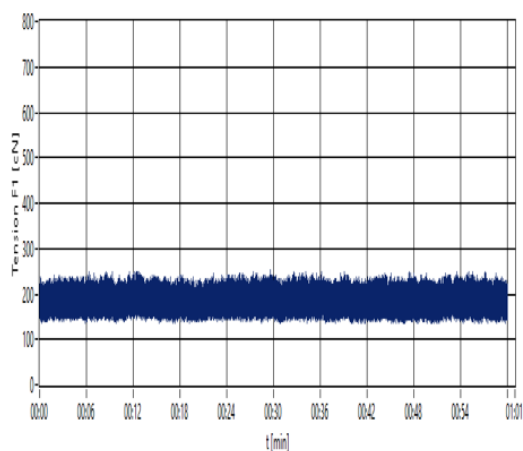
Anti-wicking I + II after 240 min, 0 mm

### untreated

Anti-wicking I + II after 240 min, >10 mm

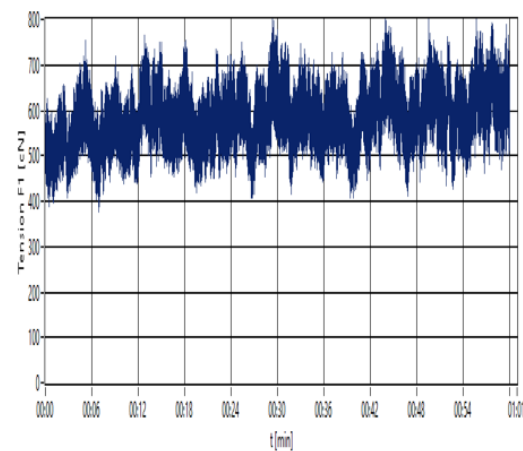
Friction - Honigman tension meter - 100% PES

### 8 % RUCO®-FIL NWF



mean	<b>186,37 cN</b>
maximum	<b>252,81 cN</b>
minimum	<b>134,06 cN</b>
std. dev.	<b>31,40 cN</b>

### untreated



mean	<b>581,62 cN</b>
maximum	<b>805,30 cN</b>
minimum	<b>377,26 cN</b>
std. dev.	<b>75,41 cN</b>

## Guideline application and recipe

As even small quantities of surface-active substances (surfactants, detergents) may cause deterioration in effect, the material to be finished has to be thoroughly pre-washed and free of surface-active residues and residual alkali.

### *Prewashing recommendation*

Liquor flow cycle only inside to outside

Prescouring: Rinse thoroughly with cold water

### *First step*

2 g/l **RUCOGEN® FWK**

1 g/l **VEROLAN® NEW**

1 g/l Soda ash

80 °C / 30 min,

Rinse thoroughly with cold water

### *Second step*

1-2 g/l **RUCO®-TEX NKS 150**

80 °C / 30 min

Rinse thoroughly with cold water

The add-on quantities depend on numerous factors, eg. yarn type, yarn quality, machine type, winding speed, roller speed and application temperatures.

The target add-on depends on the requirements and has to be determined individually.

In forced application, the add-on should correspond to a solid content of  
6 - 8 % **RUCO®-FIL NWF**

Generally, additional heat set is not necessary. The anti-wicking effect is achieved after several days. Nevertheless, a heat set up e.g. 2 - 4 h at 80 - 110 °C is recommended.

## Certifications

bluesign® approved

GOTS approved

ZDHC MRSL compliant

Standard 100 by OEKO-TEX® (suitable for class I-IV)

Contact us

[www.rudolf-group.com](http://www.rudolf-group.com)