



Technical Data

10/1/2016

Needle Oils



Introduction

Under the brand name Arrow, Arrow Plus and Nedoil, Ilsa offers special lubricants for knitting machines. The advanced state of development of our lubricants is the result of continuous research and development in our company. Our customers benefit from our wealth of experience and get customer-tailored solutions from us, if required. While formulating Needle Oil, we take special care for the following properties of needle oils, among other things.

- wash-out capability
- paint compatibility
- elastomer compatibility
- viscosity index
- corrosion behavior
- load carrying capacity

The different challenges in the knitting industry, such as high quality demand, require fast technology advancement from knitting machinery. Lubrication has therefore become one major factor in preventive maintenance approaches. Ilsa's needle oil range, ARROW, was specially designed to allow knitting circular and flatbed machinery to function at high speeds while maintaining regular running temperatures.

Ilsa's **ARROW** formulas, **ARROW PLUS** and **NEDOIL**, are based on highly refined mineral oils and contain ground breaking anti-wear technology, protecting your machine from wear and corrosion. This will allow you to maximize shelf life for key stitch forming parts such as needles, sinkers and tuck cams.

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PROTECTION AGAINST WEAR AND CORROSION

Both corrosion and wear resistance have been tested and passed DIN Test Standards. Arrow formulas approved all four of DIN 62136 SRV tests on Wear resistance (Gliding Coefficient, Wear Depth, Wear Diameter, Maximum Load), as well as Corrosion resistance DIN 51360 Test Standards.

STRONG OXYDATION RESISTANCE

Arrow has also been tested through our customers' high speed processes and various finishing treatments. Its high oxidation resistance helps limiting stains, sludge and sediment formation and additives breakdown contributing to protecting knitting machines while functioning.

HIGH SCOURABILITY

The selection of the needle oil must be made taking into account downstream finishing treatments made to knitted goods. Arrow Plus formula includes emulsifier components guaranteeing high scourability both at high and low temperatures through conventional washing processes.

COMPLIANCE WITH INTERNATIONAL STANDARDS

- Ilsa's Arrow, Arrow Plus and Nedoil formulas are free from (APEO's)
- Ilsa's Arrow, Arrow Plus and Nedoil formulas are REACH compliant
- Ilsa's new Arrow Plus and Nedoil are DIN 62136 and 51360 Test approved.

ARROW PROTECTS YOUR MACHINE FROM EARLY DAMAGE AND DETERIORATION

- Ilsa's Arrow, Arrow Plus and Nedoil guarantees high wear and corrosion protection for your machine
- Ilsa's Arrow, Arrow Plus and Nedoil formulas are harmless towards machine paints, plastic and electronic components
- Ilsa's Arrow, Arrow Plus and Nedoil formulas are strongly resistant towards oxidation, guaranteeing constant protection during high speed processes

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Application	We recommend	Souring property	Colour	Benefits
	Small dia circular knitting machine	Arrow 101	√√	Slightly yellow Established needle oil with excellent lubricating and anti wear properties Well sourable
	Large Dia circular knitting machine	Arrow 501	√√√√	Water white Partly synthetic high performance oil High temperature stability Excellent sourability
	Single / double cylinder/ jaquared knitting machine	Arrow Plus 151	√√√√	Water white High performance needle oil Excellent sourability also at low washing temperature Especially suitable for knitting of colored yarn
	Single / double cylinder / jaquared machine	Nedoil 201	√√√	Slightly Yellow Biodegradable needle oil Outstanding lubrication even at high surface pressure Very Good sourability
	Flat knitting machines	Arrow 401	√√√	Water white Established needle oil with excellent lubricating and anti wear properties Partly synthetic high performance oil High temperature stability
	Knitting machines for socks and hosiery	Arrow 333	√√√	Water white Established needle oil with excellent lubricating and anti wear properties Excellently suitable for circular lubrication Very Good sourability

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