



# DAMIDFIBRE 180

Rectangular enamelled and glass-fibre covered conductor of copper, class 180

**Product name:**

Damidfibre 180

**Properties:**

- Good resistance to mechanical stress
- Heat resistant

**Specifications:**

IEC 60317-31 or customer specification

**Field of application:**

- Dry-type transformers
- Electric motors
- Generators

**UL approval:**

Not approved

**Class: 180**

Temperature index  $\geq 180^{\circ}\text{C}$  acc. to experience

Heat shock:  $\geq 180^{\circ}\text{C}$

**Standard packaging:**

Drum 500 and 630

**Shelf life:**

5 years, under normal ambient conditions

**Insulation:**

Basecoat: THEIC-modified polyester(imide)

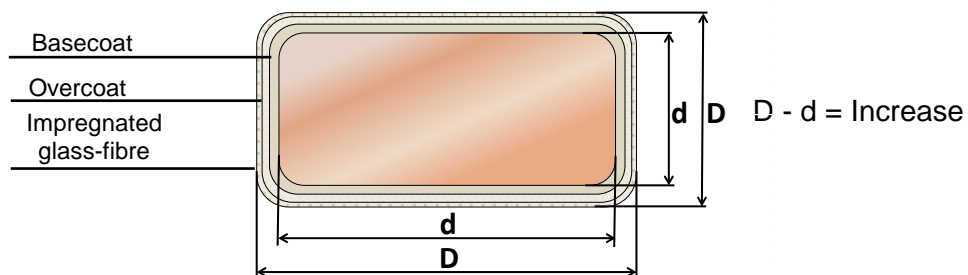
Overcoat: Polyamide-imide

1-2 layers of glass-fibre yarn

Impregnation: Polyesterimide

**Conductor material**

Cu according to EN 1977/ASTM B49



Conductor tolerances

Nominal width or thickness of the conductor (mm)		Tolerance +/- (mm)
Over	Up to and including	
-	3,15	0,030
3,15	6,30	0,050
6,30	12,50	0,070
12,50	-	0,100

Conductor corner radius

Nominal thickness of conductor (mm)		Corner radius (mm)	Tolerance
Over	Up to and including		
-	1,00	0,5 nominal thickness	+/- 25%
1,00	1,60	0,50	+/- 25%
1,60	2,24	0,65	+/- 25%
2,24	3,55	0,80	+/- 25%
3,55	-	1,00	+/- 25%

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## Insulation increase

Designation	Nominal width of conductor	Increase in thickness	Increase in width
Damidfibre 180 1	$2,00 \leq W \leq 3,15$	$0,30 \pm 0,06$	max. 0,36
	$3,15 < W \leq 6,30$	$0,32 \pm 0,06$	max. 0,38
	$6,30 < W \leq 12,50$	$0,35 \pm 0,07$	max. 0,42
	$12,50 < W \leq 20,50$	$0,38 \pm 0,08$	max. 0,46
Damidfibre 180 2 <sup>1)</sup>	$2,00 \leq W \leq 3,15$	$0,37 \pm 0,06$	max. 0,51
	$3,15 < W \leq 6,30$	$0,37 \pm 0,06$	max. 0,53
	$6,30 < W \leq 12,50$	$0,42 \pm 0,08$	max. 0,57
	$12,50 < W \leq 20,50$	$0,47 \pm 0,08$	max. 0,63

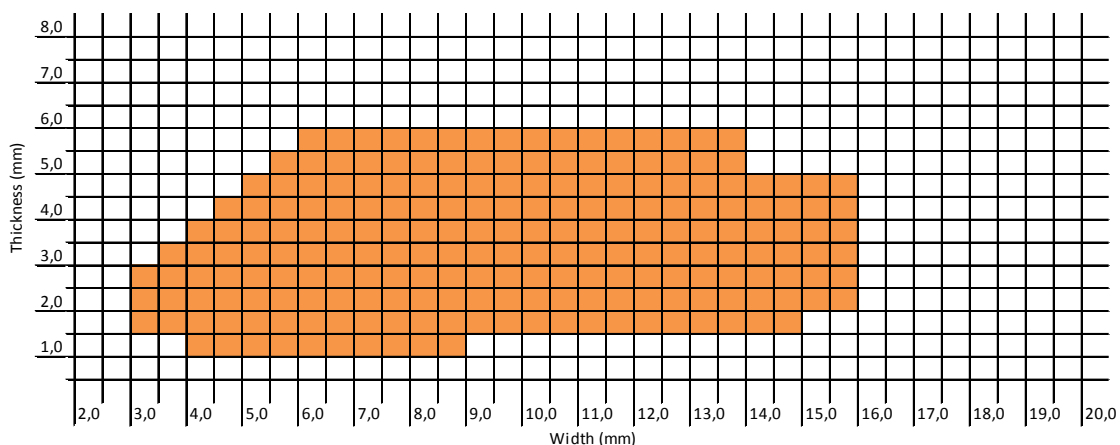
1. Not IEC standard, values modified to suit LWW production process

## Properties for DAMIDFIBRE 180

Main characteristics	Test method	Interval	Acceptance criteria
<b>Electrical properties</b>			
Conductor resistance	IEC 60851 - 5.3	1)	$0,01709 \Omega \text{mm}^2/\text{m}$
Conductivity	1/R	1)	$> 58 \text{ m}/(\Omega \text{mm}^2)$
Breakdown voltage	IEC 60851 - 5.4	All sizes	1,5 kV
- Damidfibre 180 1 - Damidfibre 180 2			2,0 kV
<b>Mechanical properties</b>			
Elongation	IEC 60851-3.3	$1,00 \leq T \leq 2,50$	$\geq 30\%$
		$T > 2,50$	$\geq 32\%$
Springback angle	IEC 60851-3.4	All sizes	$\leq 5,5^\circ$
Flexibility	IEC 60851-3.5	$W \leq 8 \text{ mm}$ $W > 8 \text{ mm}$	10 x width
- Bending edgewise			15 x width
- Bending flatwise		All sizes	10 x thickness
Adherence	IEC 60851-3.5	All sizes	10 % stretch, no loss of adhesion
-Stretch			

1. Dependence of dimension is expressed by the unit

## Dimension range



The technical data included is up to date at the time of printing.  
LWW reserve the right to make any amendments deemed necessary

Liljedahl Winding Wire

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liljedahl winding wire