



DAMIDFIBRE EP 180

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

Product name:

Damidfibre EP 180 1
 Damidfibre EP 180 2

Properties:

- Excellent resistance to mechanical stress
- B-stage cured epoxy layer allows pre-pressing of windings

Specifications:

Internal Dahrén or customer specification

Field of application:

- Transformers
- Large generators
- Electric motors

UL approval:

Not approved

Standard packaging:

K500, VM630

Class: 180

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

Heat shock: $\geq 200^{\circ}\text{C}$

Shelf life:

6 month, under normal ambient conditions

Insulation:

Basecoat: THEIC-modified polyester or polyesterimide

Overcoat: Polyamide-imide

1-2 layers of glass-fibre yarn

Impregnation: Polyesterimide

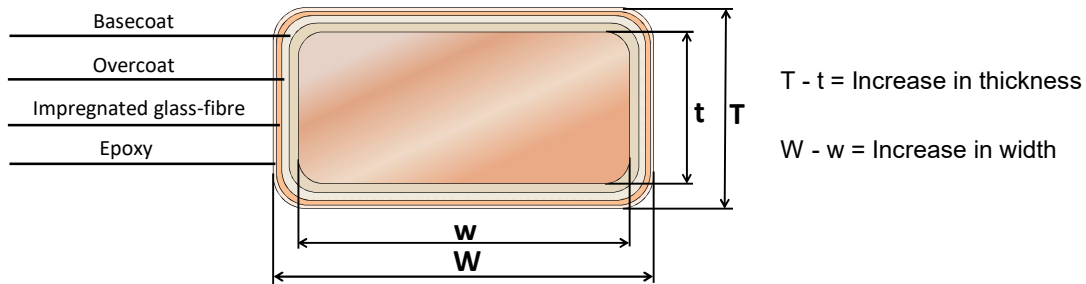
Adhesive layer: Epoxy

Conductor material

EN 1977 - ETP1 CW003 A

EN 1977 - ETP CW004A

ASTM B49 - ETP C11000/C11040



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%

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

Certified according to ISO 9001, IATF 16949, ISO 14001

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Insulation increase (all measures in mm)

Designation	Nominal width of conductor	Increase in thickness	Increase in width
Damidfibre 180 EP 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 EP 2 ¹⁾	$2,00 \leq w \leq 3,15$	$0,37 \pm 0,06$	max. 0,43
	$3,15 < w \leq 6,30$	$0,37 \pm 0,06$	max. 0,43
	$6,30 < w \leq 12,50$	$0,42 \pm 0,08$	max. 0,50
	$12,50 < w \leq 20,50$	$0,47 \pm 0,08$	max. 0,55

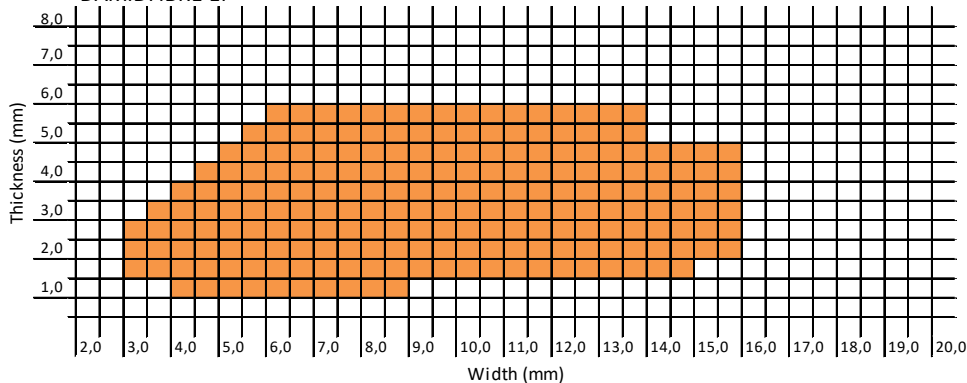
1. Not IEC standard, values modified to suit Dahrén productionprocess

Properties for DAMIDFIBRE EP 180

Main characteristics	Test method	Interval	Acceptance criteria
Electrical properties			
Conductor resistance	IEC 60851 - 5.3	1)	$0,01724 \Omega\text{mm}^2/\text{m}$
Conductivity	1/R	1)	$> 58 \text{ m}/(\Omega\text{mm}^2)$
Breakdown voltage	IEC 60851 - 5.4	All sizes	1,5 kV
- Damidfibre EP 180 1 - Damidfibre EP 180 2			2,0 kV
Mechanical properties			
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	$w \leq 8 \text{ mm}$	10 x width
- Bending edgewise		$w > 8 \text{ mm}$	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 DAMIDFIBRE EP



The technical data included is up to date at the time of printing.

Dahrén reserves the right to make any amendments deemed necessary

Rev. 4, st