



DAMIDFIBRE EP 180 AL

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

Product name:

Damidfibre EP 180 1 AL
 Damidfibre EP 180 2 AL

Properties:

- Excellent resistance to mechanical stress
- Suitable in lightweight designs

Specifications:

Internal LWW or customer specification

Field of application:

- Generators
- Large motors
- Welding equipment

UL approval:

Not approved

Standard packaging:

Drum 500 and 630

Class: 180

Temperature index $\geq 180^{\circ}\text{C}$ acc. to experience
 Heat shock: $\geq 200^{\circ}\text{C}$

Shelf life:

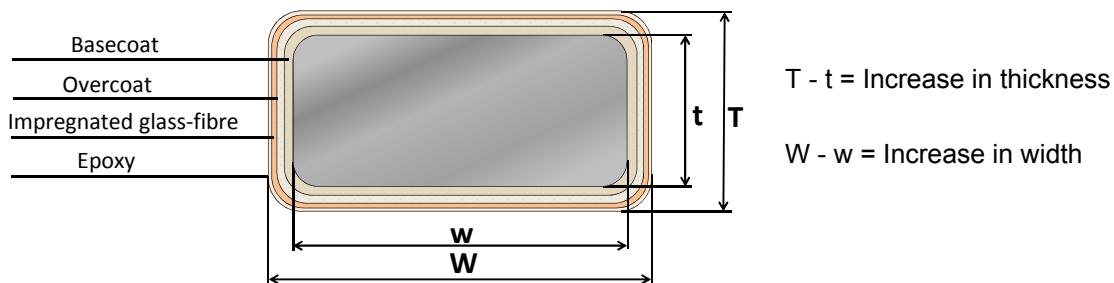
6 month, under normal ambient conditions

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 1715 - EN AW1370 [Al 99.7]



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

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Insulation increase

Designation	Nominal width of conductor	Increase in thickness	Increase in width
Damidfibre EP 180 1 AL	$2,00 \leq w \leq 3,15$	$0,30 \pm 0,06$	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 EP 180 2 AL ¹⁾	$2,00 \leq w \leq 3,15$	$0,37 \pm 0,06$	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

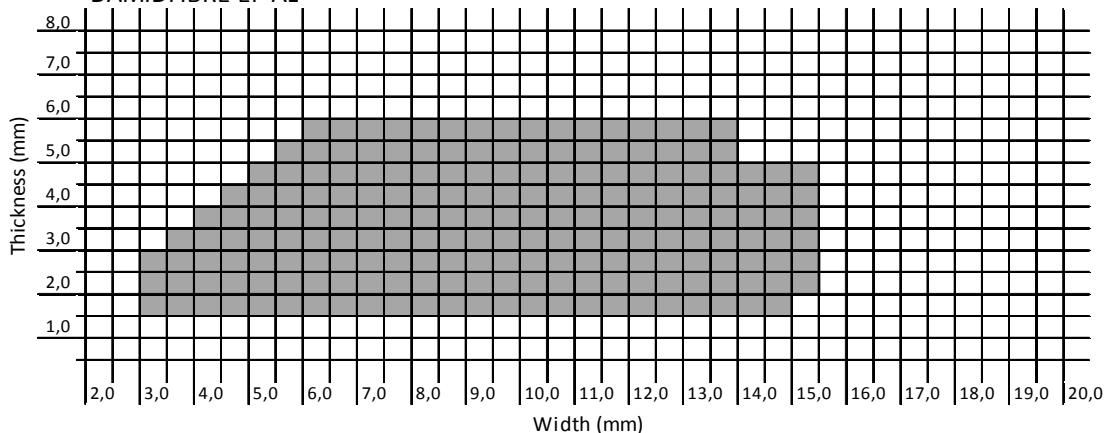
Properties for DAMIDFIBRE EP 180 AL

Main characteristics	Test method	Interval	Acceptance criteria
Electrical properties			
Conductor resistance	IEC 60851 - 5.3	¹⁾	$0,02817 \Omega\text{mm}^2/\text{m}$
Conductivity	1/R	¹⁾	$> 35,5 \text{ m}/(\Omega\text{mm}^2)$
Breakdown voltage	IEC 60851 - 5.4	All sizes	1,5 kV
- Damidfibre EP 180 1 AL - Damidfibre EP 180 2 AL			2,0 kV
Mechanical properties			
Elongation	IEC 60851-3.3	$t \leq 3,15$	$\geq 15\%$
		$t > 3,15$	$\geq 20\%$
Flexibility	IEC 60851-3.5	All sizes	10 x thickness
- Bending flatwise			
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

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

LWW reserves the right to make any amendments deemed necessary

Ed.A(3)

