



DAMIDFIBRE 180 AL

Rectangular enamelled conductor of aluminium, covered with glassfibre yarn, class 180

Product name:

Damidfibre 180 1 AL
 Damidfibre 180 2 AL

Properties:

- Excellent resistance to mechanical stress
- Heat resistant

Specifications:

Internal Dahrén or customer specification

Field of application:

- Generators
- Electric machines

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:

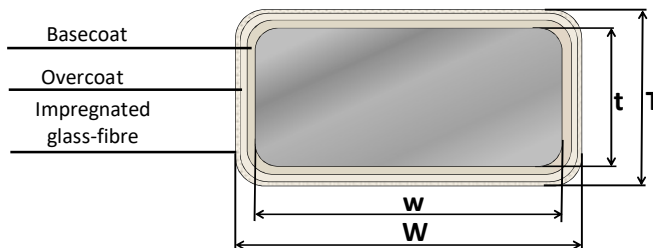
5 years, under normal ambient conditions

Insulation:

Basecoat: THEIC-modified polyester or polyesterimide
 Overcoat: Polyamide-imide
 1-2 layers of glass-fibre yarn
 Impregnation: Polyesterimide

Conductor material:

EN 1715 - EN AW1370 [Al 99.7]



$T - t =$ Increase in thickness

$W - w =$ Increase in width

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 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 180 2 AL 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

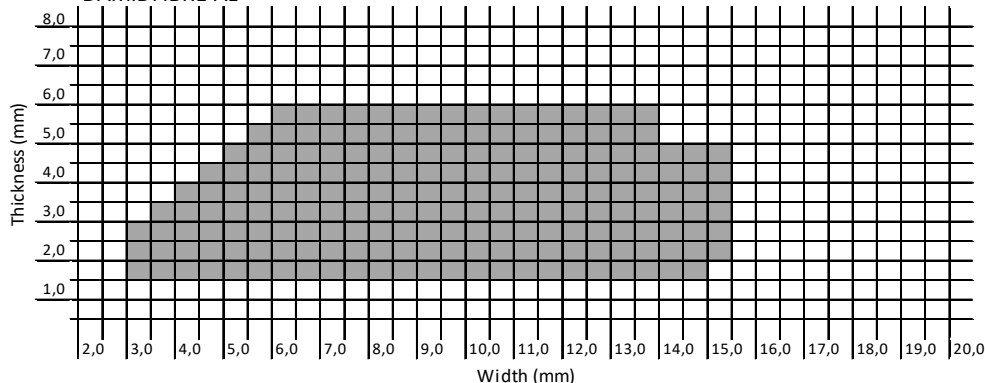
Properties for DAMIDFIBRE 180 AL

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 180 AL 1 - Damidfibre 180 AL 2			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

DAMIDFIBRE AL



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

LWW reserves the right to make any amendments deemed necessary

Rev. 4, st