



# SINOALUM GAFIBRE 180

Rectangular conductor of copper, covered with glassfibre yarn, class 180

**Product name:**

- Gafibre 180 1
- Gafibre 180 2
- Gafibre 180 3

**Specifications:**

IEC 60317-31 or customer specification

**UL approval:**

Not approved

**Class: 180**

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

**Insulation:**

1-3 layers of glass-fibre yarn  
Impregnation: Polyesterimide

**Properties:**

- Excellent resistance to mechanical stress

**Field of application:**

- Dry-type transformers
- Electric motors
- Magnet coils
- Generators

**Standard packaging:**

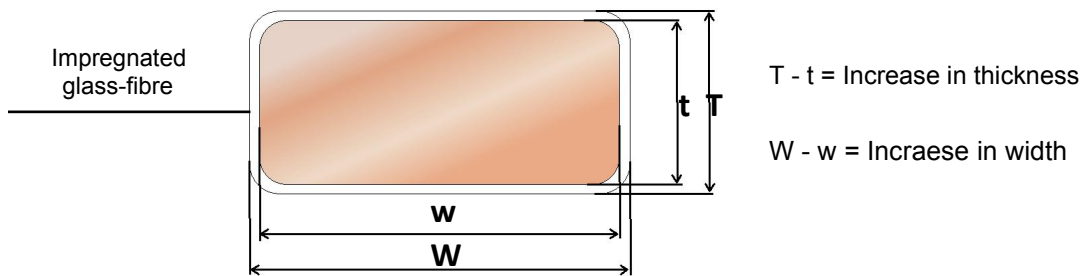
K500, VM630

**Shelf life:**

5 years, under normal ambient conditions

**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

# SINOALUM GAFIBRE 180

Rectangular conductor of copper, covered with glassfibre yarn, class 180

## Insulation increase

Designation	Nominal width of conductor	Increase in thickness	Increase in width
Gafibre 180 1	$2,00 \leq w \leq 3,15$	$0,16 \pm 0,04$	max. 0,20
	$3,15 < w \leq 6,30$	$0,18 \pm 0,04$	max. 0,22
	$6,30 < w \leq 12,50$	$0,21 \pm 0,05$	max. 0,26
	$12,50 < w \leq 20,50$	$0,24 \pm 0,06$	max. 0,30
Gafibre 180 2	$2,00 \leq w \leq 3,15$	$0,27 \pm 0,06$	max. 0,33
	$3,15 < w \leq 6,30$	$0,30 \pm 0,07$	max. 0,37
	$6,30 < w \leq 12,50$	$0,35 \pm 0,08$	max. 0,43
	$12,50 < w \leq 20,50$	$0,39 \pm 0,08$	max. 0,47
Gafibre 180 3	$2,00 \leq w \leq 3,15$	$0,44 \pm 0,09$	max. 0,53
	$3,15 < w \leq 6,30$	$0,46 \pm 0,09$	max. 0,55
	$6,30 < w \leq 12,50$	$0,50 \pm 0,11$	max. 0,61
	$12,50 < w \leq 20,50$	$0,64 \pm 0,14$	max. 0,78

## Properties for GAFIBRE 180

Main characteristics	Test method	Interval	Acceptance criteria
<b>Electrical properties</b>			
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	350 V
- Gafibre 180 1			560 V
- Gafibre 180 2			750 V
- Gafibre 180 3			
<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	$w \leq 8 \text{ mm}$	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

