

DAMIDFIBRE 155

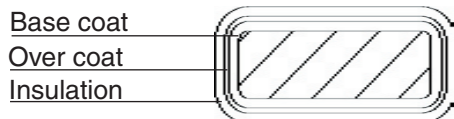
Rectangular enamelled and glass-fibre covered conductor of copper, class 155

Product name
DAMIDFIBRE 155

Specification
IEC 60317-32
NEMA MW 42-C

Class 155
Temperature index $\geq 155^{\circ}\text{C}$ as per IEC 60172
Heat shock $\geq 175^{\circ}\text{C}$

Insulation
Base coat: THEIC-modified polyester(imide)
Over coat: Polyamide-imide
Insulation: 1-3 layers of glass-fibre yarn
Impregnation: Polyurethane



Properties
- Resistant to mechanical stresses in windings

Field of application
- Dry-type transformers
- Welding transformers
- Windings with extreme mechanical stress
- Magnet coils

Reels
Reel 500, 630

Length as a function of mass can be expressed:

$$l(m) = \frac{1000 m}{8,93 A} \text{ for: } A = W T - (4 - \pi)r^2$$

l = length in m
m = mass in kg
A = cross section in mm^2

Conductor tolerance/mm

Width (W)	Tolerance	Thickness (T)	Tolerance
$2,00 \leq W \leq 3,15$	$\pm 0,03$	$1,00 \leq T \leq 3,15$	$\pm 0,03$
$3,15 < W \leq 6,30$	$\pm 0,05$	$3,15 < T \leq 6,00$	$\pm 0,05$
$6,30 < W \leq 12,50$	$\pm 0,07$		
$12,50 < W \leq 16,00$	$\pm 0,10$		

Conductor corner radius/mm

Thickness(T)	Radius (r)	Tolerance
$1,00 < T \leq 1,60$	0,50	$\pm 25\%$
$1,60 < T \leq 2,24$	0,65	$\pm 25\%$
$2,24 < T \leq 3,55$	0,80	$\pm 25\%$
$3,55 < T \leq 6,00$	1,00	$\pm 25\%$

Increase and tolerance for the conductor insulation/mm

Type of product	Conductor width	Nominal increase	Tolerance in width	Conductor thickness	Tolerance in thickness
DAMIDFIBRE 1 155	$2,00 \leq W \leq 3,15$	0,30	$\pm 0,06$	$1,00 < T \leq 6,00$	$\pm 0,06$
	$3,15 < W \leq 6,30$	0,32	$\pm 0,06$		
	$6,30 < W \leq 12,50$	0,35	$\pm 0,07$		
	$12,50 < W \leq 16,00$	0,38	$\pm 0,08$		
DAMIDFIBRE 2 155	$2,00 \leq W \leq 3,15$	0,44	$\pm 0,07$	$1,00 < T \leq 6,00$	$\pm 0,07$
	$3,15 < W \leq 6,30$	0,46	$\pm 0,07$		
	$6,30 < W \leq 12,50$	0,50	$\pm 0,07$		
	$12,50 < W \leq 16,00$	0,55	$\pm 0,08$		

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Properties for enamelled and glass-fibre covered rectangular wire - DAMIDFIBRE 155

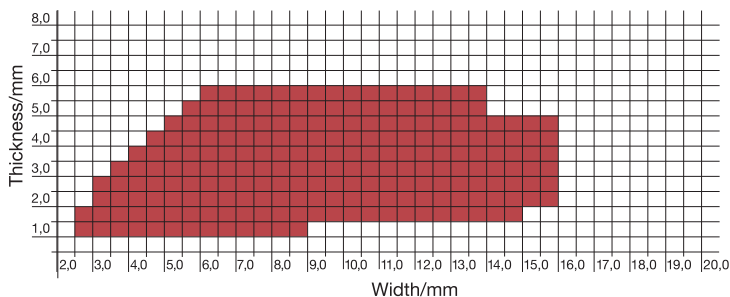
Characteristics	Test method	Interval	Acceptance criteria ¹⁾	Typical test results
Mechanical properties				
Elongation at fracture	IEC 60851 - 3.3.1	1,00 ≤ T ≤ 2,50 2,50 < T ≤ 8,00	≥ 30 % ≥ 32 %	45 % 45 %
Tensile strength	IEC 60851 - 3.3.2	1,00 ≤ T ≤ 3,00 3,00 < T ≤ 8,00	200 - 270 N/mm ² ³⁾ 200 - 260 N/mm ² ³⁾	250 N/mm ² 250 N/mm ²
Spring back	IEC 60851 - 3.4.2	1,00 ≤ T ≤ 8,00	≤ 5,5°	4,1 °
Flexibility - Edgewise and flatwise bending	IEC 60851 - 3.5.1.2	2,50 ≤ B ≤ 8,00 8,00 < B ≤ 19,0 1,00 ≤ T ≤ 8,00	10 x W 15 x W 10 x T	10 x W 15 x W 10 x T
Adherence - Elongation	IEC 60851 - 3.5.5.1	1,00 ≤ T ≤ 8,00	10 % stretch	15 % stretch
Electrical properties (20°C)				
Conductor resistance (R)	IEC 60851 - 5.3	2)	0,01709 Ωmm ² /m	-
Conductivity	1/R	2)	> 58 m/(Ωmm ²)	-
Electrical breakdown voltage - Damidfibre 1 - Damidfibre 2	IEC 60851 - 5.4.2	4)	1,5 kV 2,0 kV	5,0 kV 5,0 kV

Comments:

- 1) Acceptance criteria are obtained from IEC 60317-0-4 and IEC 60317-32 unless otherwise is stated
- 2) The dependence of dimension is expressed by the unit
- 3) Acceptance criteria as per EN 13601 for Cu-ETP
- 4) Property independent of dimension

Dimension range

DAMID, DAMIDFIBRE,
DAMIDOGLAS, DAMIDFIBRE EPOXY



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

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