



Taped flat wires

MicaR PI

Rectangular bare or enameled annealed copper wire covered by mica tapes

General description

MicaR PI family products are indicated in the construction electric motor and generators where final product must be guaranteed class H. For low and medium voltage Mica PI products uses bare conductors, for high voltage applications enameled conductor is required.

Conductor insulation is obtained using muscovite Mica tapes backed on Polyimide support, MicaR PI production can use till three tapes in one passage realizing up to six layers of insulation per side. MicaR PI products are suitable for VPI impregnation process.

Applications

Conductors from MicaR family are suitable for low, medium and high voltage machines, particularly when class H final product (motor or generator) has to be guaranteed.

Available range

Thickness of bare conductors from 1 to 5 mm
Width of bare conductor from 4 to 15 mm

Typical technical values

Feature	2 layers (1 tape 50% overlapped or 2 tapes butlapped and displaced 50%)		3 layers (3 tapes butlapped and displaced 33%)	
	Bare annealed		Enameled	
Wire nature	Bare annealed		Enameled	
Increase due to insulation in mm	0.30 - 0.36	0.48 - 0.56	0.42 - 0.48	0.60 - 0.68
Elongation %	≥ 32	≥ 32	≥ 32	≥ 32
Spingback angle	≤ 5°	≤ 5°	≤ 5°	≤ 5°
Breakdown voltage				
• Flatwise bent on 4 times thickness	> 2 kV	> 3 kV	> 8 kV	> 10 kV
• Edgewise bent on 6 times width	> 2 kV	> 3 kV	> 7 kV	> 9 kV

Notes

- Increase in diameter is intended using 0.09 tape thickness, other thickness can be used under specific inquiry
- Standards references, where applicable, IEC60317 (in its parts for dimensions and mechanical properties for enameled wires), IEC60851 for test methods
- Other wrapping configurations and reference values must be agreed and discussed