
SynTherm® NPN/130 411

SynTherm® NPN/130 411 is a flexible 3-ply insulation.

It consists of a polyester film with an uncalandered Nomex® layer type 411 on both sides.

Attributes

The proven electrical and mechanical properties of the polyester film and the excellent thermal resistance of the outer Nomex® layers result in a high performance insulating material. SynTherm® NPN/130 411 is easy to form and, therefore, displays good processing characteristics as phase insulation. The ability of the uncalandered Nomex® layers to absorb impregnants results in excellent bonding between all winding components. SynTherm® NPN/130 411 is characterised by its high thermal and chemical resistance.

Application

SynTherm® NPN/130 411 is especially used as phase insulation for electric motors. In special cases SynTherm® NPN/130 411 can be used as core and interlayer insulation for transformers.

Standards

- Suitable for class H (180 °C) systems
- Insulating material according to IEC 60626

Delivery forms

Total thickness in µm:

270, 300, 350

SynTherm® NPN/130 411 can be supplied:

- in slit rolls from widths of 10 mm and above
- in rolls up to approx. width of 950 mm
- in sheets on request: approx. 600 x 950 mm, 950 x 1,000 mm

Feathering:

- depth approx. 1 - 12 mm, distance approx. 1 - 10 mm
- from widths of 10 to 240 mm and thickness of 0.20 mm

Base

PET-film + uncalandered Nomex® on both sides

The information on this data sheet is based on the information provided by our supplier. It does not represent any specification or agreements regarding conditions or properties. The indicated values are standard values. Deviations from those values due to production and application cannot be excluded. The information on this data sheet is addressed to experts who use it at their own discretion and at their own risk. We do not guarantee results, or accept liability for the indicated specifications or for results obtained based on the specifications. Please contact us for more detailed information. Non-toxic and toxic substances are listed on the safety data sheet.

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Mechanical	Unit of measure				Test method
Total thickness	mm	0.27	0.30	0.35	standard climate 23/50
Film thickness	µm	36	50	125	standard climate 23/50
Specific weight	g/m²	155	170	280	standard climate 23/50
Tensile strength longitudinal	N/10 mm	60	75	140	standard climate 23/50
Tensile strength transversal	N/10 mm	60	75	140	standard climate 23/50
Elongation at break longitudinal*	%	5	5	7	standard climate 23/50
Elongation at break transversal*	%	10	10	10	standard climate 23/50

Electrical	Unit of measure				Test method
Total thickness	µm	0.27	0.30	0.35	standard climate 23/50
Dielectric strength	kV	5	6	12	standard climate 23/50

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