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## SynTherm® NP/50

SynTherm® NP/50 is a flexible 2-layer insulation made of polyester film with calandered Nomex® overlay.

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### Attributes

SynTherm® NP/50 is a high-class insulation material due to the proven electrical properties of the polyester film and the excellent mechanical and thermal properties of the outer Nomex® overlays. The outer overlays' impregnant absorptivity allows excellent bonding of all winding components.

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### Application

SynTherm® NP/50 is an economic option and suitable for use as slot insulation, wedges, and phase insulation in electric motors.

In transformers it can be used as core, layer, or cover insulation.

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### Standards

- Class F (155 °C) acc. to IEC 60085
- Insulation material to IEC 60626
- Test standard IEC 60626-2
- Sample conditioning acc. to standard atmosphere 23/50

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### Delivery forms

#### Total thickness µm:

80, 100, 140, 160, 180, 240, 300, 350, 410.

Other total thickness on request.

#### SynTherm® NP/50 available in delivery formats:

- tapes starting from 4 mm width
- rolls with approx. 900 mm width
- on request: approx. 600 x 900 mm
- 900 x 1000 mm

Outer diameters of tapes/ rolls optionally approx. 240/ 330/ 450 mm.

### Feathering:

- depth approx. 1 - 12 mm, distance approx. 1 - 10 mm
- as of 10 mm up to 240 mm width and 0.20 mm thickness

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## Base

PET-film + aramid paper

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Updated 07/21

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<b>Mechanical</b>	Unit of measure						
Total thickness	mm	0.08	0.10	0.14	0.18	0.24	0.30
Film thickness	µm	23	50	75	125	190	250
Nomex® paper thickness	µm	50	50	50	50	50	50
Specific weight	g/m²	95	125	160	230	320	390
Tensile strength longitudinal	N/10 mm	100	105	130	160	230	280
Tensile strength transversal	N/10 mm	70	80	90	100	200	300
Elongation at break longitudinal*	%	15	15	15	15	20	20
Elongation at break transversal*	%	20	20	20	20	20	20

<b>Electrical</b>	Unit of measure						
Total thickness	mm	0.08	0.10	0.14	0.18	0.24	0.30
Dielectric strength	kV	5	7	9	12	15	18

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