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## SynTherm® DMD

SynTherm® DMD is a flexible 3-ply insulating material made of polyester film covered with a layer of impregnated fleece on both sides.

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### Attributes

SynTherm® DMD is a Class F (155 °C) insulating material and has a high dielectric and high mechanical strength. It is tough and flexible.

This allows for easy insertion into the slot and the spreading effect ensures a sturdy grip. The smooth surface makes SynTherm® DMD ideal at automatic insulating and insertion machines. Additionally, it provides excellent adhesion in conjunction with impregnating materials.

The outer cured resin impregnation protects the polyester film against oxidation and hydrolysis.

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### Application

SynTherm® DMD is used as slot insulation and for pre-shaped wedges in electric motors. Due to its special surface qualities it is also used as phase insulation. SynTherm® DMD is commonly used as core, interlayer und final insulation for the production of transformers.

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### Standards

- Class F insulating material (155 °C)
- UL approved, e.g. E247773
- Test standard IEC 60626-2
- Sample conditioning acc. to standard atmosphere 23/50

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### Delivery forms

#### Total thickness in µm:

100,130, 150, 180, 200, 230, 280, 340, 450

#### SynTherm® DMD can be supplied:

- in slit rolls from widths of 6 mm (depending on thickness) and above
- in rolls approx. width 1260 mm
- in sheets approx. 630 mm x 800 mm or approx. 800 mm x 1260 mm

**Overall diameter of the slit rolls/ rolls** as required approx. 240, 330 or 450 mm.

#### Feathering:

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- depth approx. 1 - 12 mm, distance approx. 1 - 10 mm
  - from widths of 10 to 240 mm and thickness of 0.23 mm
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## **Base**

PET-film + both sided impregnated non-woven layer

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Mechanical	Unit of measure						
Total thickness	mm	0.10	0.13	0.15	0.18	0.20	0.23
Thickness tolerance	%	± 15	± 15	± 15	± 15	± 15	± 15
Specific weight	g/m <sup>2</sup>	96	115	145	190	220	260
Film thickness	µm	36	23	50	75	100	125
Tensile strength longitudinal	N/10 mm	60	50	110	140	160	200
Tensile strength transversal	N/10 mm	50	40	90	105	120	150
Elongation at break (unfold) longitudinal	%	20	20	20	20	20	20
Elongation at break (unfold) transversal	%	50	50	50	50	50	50

Mechanical	Unit of measure			
Total thickness	mm	0.28	0.34	0.45
Thickness tolerance	%	± 15	± 10	± 10
Specific weight	g/m <sup>2</sup>	350	425	560
Film thickness	µm	190	250	350

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<b>Mechanical</b>	Unit of measure			
Tensile strength longitudinal	N/10 mm	300	350	400
Tensile strength transversal	N/10 mm	200	300	350
Elongation at break (unfold) longitudinal	%	20	20	20
Elongation at break (unfold) transversal	%	50	50	50

<b>Electrical</b>	Unit of measure						
Total thickness	mm	0.10	0.13	0.15	0.18	0.20	0.23
Dielectric strength (unfold)	kV	4.5	4	6	7	9	10

<b>Electrical</b>	Unit of measure			
Total thickness	mm	0.28	0.34	0.45
Dielectric strength (unfold)	kV	15	18	22

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