SynFlex Elektro GmbH
Auf den Kreuzen 24
D-32825 Blomberg Germany
Telefon +49-5235-968-0
E-Mail info@synflex.de

SynTherm® YT510 DDP

SynTherm® YT510 DDP is a synthetic electro-insulation paper constructed of a calandered, aromatic polyamide fibride flock composition. Both sides of the paper are printed with a B-stage Epoxy resin in a diamond dotted pattern.

Attributes

The base material SynTherm® YT510 is a Class H (180 °C) insulating material. Temperatures below 200 °C only slightly influence its electrical properties. The good mechanical properties can be extrapolated to significantly higher temperatures. SynTherm® YT510 is also suitable for us at temperatures to -190 °C due to its polymer-structure. It has a high short-term dielectric strength. SynTherm® YT510 is compatible with all classes of common resins, varnishes, adhesives as well as transformer liquids, lubricants, and cooling agents. Common solvents may lead to slight reversible moisture expansion. SynTherm® YT510 has low flammability (UL 94V-0) and very high resistance to beta and gamma radiation.

Application

SynTherm® YT510 DDP is used as layer insulation in transformers.

Standards

- Insulating material class F (155 °C). Base material class H (180 °C)
- The base material is UL listed (RTI mech. + electr. 210 °C)

Delivery forms

Material thickness in µm:

50, 80, 130, 180, 250, 300, 380, 510, 760

SYNTHERM® YT510 DDP is available:

- in tapes: depending on material thickness on request beginning at 6mm (thin material)
- in rolls: 1000 mm

Feathering:

- depth approx. 1 - 12 mm, distance approx. 1 - 10 mm
- 10 mm up to 240 mm width, thickness on request

Base

Calandered, aromatic polyamide fibride flock composition with diamond dotted B-stage resin 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.
Updated 07/21

SynFlex Elektro GmbH
Auf den Kreuzen 24
D-32825 Blomberg Germany
Telefon +49-5235-968-0
E-Mail info@synflex.de

Mechanical	Unit of measure						
Nominal thickness	µm	80	130	180	250	300	
Typical thickness	µm	52	78	130	180	255	290
Specific weight	g/m²	41.5	63	116	170	252	291
Tensile strength longitudinal	N/cm	41	66	130	200	290	340
Tensile strength transversal	N/cm	17	29	60	75	120	155
Elongation at break longitudinal	%	7.5	9.5	10.5	11.5	11.5	10.5
Elongation at break transversal	%	7.0	9.5	11.5	12.5	13.5	10.5
Shrinkage at 300 °C longitudinal	%	3.5	3.0	3.0	3.0	3.0	
Shrinkage at 300 °C transversal	%	3.0	2.5	2.5	2.5	2.5	
Elmendorf tear strength longitudinal	N	1.05	2.2	3.5	5.0	6.5	
Elmendorf tear strength transversal	N	1.1	2.05	3.8	4.8	6.0	8

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.
Updated 07/21

SynFlex Elektro GmbH
Auf den Kreuzen 24
D-32825 Blomberg Germany
Telefon +49-5235-968-0
E-Mail info@synflex.de

Mechanical	Unit of measure				Test standard
Nominal thickness	µm	380	510	760	
Typical thickness	µm	380	515	765	GB/T451.3-2002
Specific weight	g/m²	376	510	710	GB/T451.2-2002
Tensile strength longitudinal	N/cm	420	500	650	GB/T12914-2008
Tensile strength transversal	N/cm	250	345	450	GB/T12914-2008
Elongation at break longitudinal	%	12.0	13	13	GB/T12914-2008
Elongation at break transversal	%	13.0	13	12	GB/T12914-2008
Shrinkage at 300 °C longitudinal	%	3.0	3.0	3.0	IEC60819-2:2002
Shrinkage at 300 °C transversal	%	2.5	2.0	2.0	IEC60819-2:2002
Elmendorf tear strength longitudinal	N	10.0	13	-	GB/T455-2002
Elmendorf tear strength transversal	N	13.5	16	-	GB/T455-2002

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.
Updated 07/21

SynFlex Elektro GmbH
Auf den Kreuzen 24
D-32825 Blomberg Germany
Telefon +49-5235-968-0
E-Mail info@synflex.de

Properties of B-stage resin	Unit of measure					
Thickness increase (one side)	µm	10±15 %				
Basic weight increase (both sides)	g/m²	5±10 %				
Curing conditions	h	1	3	10	20	30
Curing conditions	°C	130	120	110	100	90
Shelf life		6 months after production				

Electrical	Unit of measure	
Nominal thickness	µm	50
Dielectric constant (50 Hz)		1.5
Field intensity	kV/mm	16

Electrical	Unit of measure						
Nominal thickness	µm	80	130	180	250	300	380

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.
Updated 07/21

SynFlex Elektro GmbH
Auf den Kreuzen 24
D-32825 Blomberg Germany
Telefon +49-5235-968-0
E-Mail info@synflex.de

Electrical	Unit of measure						
Dielectric constant (50 Hz)		1.5	2.1	2.4	2.5	2.7	3.0
Field intensity	kV/mm	16	20	21	24	22	23

Electrical	Unit of measure			Test standard
Nominal thickness	µm	510	760	
Dielectric constant (50 Hz)		3.1	3.2	GB/T1409-2006
Field intensity	kV/mm	21	18	GB/T1408.1-2006

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.
Updated 07/21