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

SynTherm® YT510 (metastar® YT510)

SynTherm® YT510 is a synthetic electro-insulation paper constructed of a calandered, aromatic polyamide fibride flock composition.

Attributes

SynTherm® YT510 is a Class H (180 °C) insulating material. Temperatures below 200 °C only slightly influence its electrical properties. The excellent mechanical properties can be extrapolated at much higher temperatures. Due to the polymer structure, SynTherm® YT510 can also be used at temperatures as low as -190 °C.

It has a high short-time field intensity. SynTherm® YT510 is compatible with all common resin, varnish, adhesive classes, as well as transformer liquids, oils and refrigerants. Common solvents can result in easily reversible expansion. SynTherm® YT510 paper is flame resistant (UL 94V-0), moreover, it displays a very high level of beta and gamma-ray resistance.

Application

High quality SynTherm® YT510 is used in almost all known applications for electrical insulating materials. Application ranges from AC and DC motors to large generators, wet and dry transformers and chokes, even with beta and gamma radiation exposure.

Standards

- Class H (180 °C) insulating material
- UL approved (RTI 210 °C)
- UL file no. E358562

Delivery forms

Material thickness in µm:

130, 180, 250, 300, 380, 510, 610, 760

SYNTHERM® YT510 can be supplied:

- in slit rolls: Depending on the material thickness
- in rolls: 1000 mm

Feathering:

- depth approx. 1 - 12 mm, distance approx. 1 - 10 mm
- from widths of 10 to 240 mm and thickness of 0.25 mm

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

Base

Calandered, aromatic polyamide fibride flock composition

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	50	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	3.5	3.0	3.0	3.0	3.0
Shrinkage at 300 °C transversal	%	3.0	3.0	2.5	2.5	2.5	2.5
Elmendorf tear strength longitudinal	N	0.65	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	8.0

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 method
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	13	-	GB/T455-2002
Elmendorf tear strength transversal	N	13.5	16	-	GB/T455-2002

Electrical	Unit of measure						

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						
Nominal thickness	µm	50	80	130	180	250	300
Field intensity	kV/mm	16	16	20	21	24	22
Dielectric constant (50 Hz)		1.5	1.5	2.1	2.4	2.5	2.7

Electrical	Unit of measure				Test method
Nominal thickness	µm	380	510	760	
Field intensity	kV/mm	23	21	18	GB/T1408.1-2006
Dielectric constant (50 Hz)		3.0	3.1	3.2	GB/T1409-2006

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