
SynTherm® YT564 (metastar® YT564)

SynTherm® YT564 is a synthetic electro-insulation paper consisting of a calandered, aromatic polyamide fibrille flock composition, good glue affinity and composite capacity.

Attributes

SynTherm® YT564 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® YT564 is also suitable for use at temperatures to -190 °C due to its polymer structure. It has a high short-term dielectric strength. SynTherm® YT564 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® YT564 has low flammability (UL 94V-0) and very high resistance to beta and gamma radiation.

Application

SynTherm® YT564 is suitable for compositing with polyester film and the polyimide film F- and H-class laminates. SynTherm® YT564 is also used for wrapping copper or aluminium conductors.

Standards

- Thermal class H (180 °C)
- UL file no. E358562
- UL listed (RTI mech. + electr. 210 °C)

Delivery forms

Film thicknesses in µm:

40, 50, 80, 130

SynTherm® YT564 is available:

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

Feathering:

- Depth approx. 1-12 mm; distance approx. 1-10 mm
- Form widths of 10 mm to 240 mm, thickness on request

Base

Calandered, aromatic polyamide fibrille flock composition

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Updated 10/18

SynTherm® is a registered trademark of SynFlex.



| Typical mechanical properties | Unit of measure | | | | | Test method |
|--------------------------------------|-----------------|------|------|------|------|-----------------|
| Nominal thickness | µm | 40 | 50 | 80 | 130 | |
| Typical thickness | µm | 40 | 50 | 80 | 130 | GB/T451.3-2002 |
| Specific weight | g/m² | 29 | 38 | 63 | 116 | GB/T451.2-2002 |
| Tensile strength longitudinal | N/cm | 22 | 32 | 60 | 125 | GB/T12914-2008 |
| Tensile strength transversal | N/cm | 8 | 14 | 25 | 50 | GB/T12914-2008 |
| Elongation at break longitudinal | % | 4.5 | 5.5 | 7.0 | 8.5 | GB/T12914-2008 |
| Elongation at break transversal | % | 5.0 | 6.0 | 8.0 | 10.0 | GB/T12914-2008 |
| Shrinkage at 300 °C longitudinal | % | 4.4 | 4.4 | 4.0 | 3.5 | IEC60819-2:2002 |
| Shrinkage at 300 °C transversal | % | 3.5 | 3.3 | 3.2 | 3.0 | IEC60819-2:2002 |
| Elmendorf tear strength longitudinal | N | 0.50 | 0.70 | 1.20 | 1.70 | GB/T455-2002 |
| Elmendorf tear strength transversal | N | 0.70 | 1.10 | 2.00 | 2.80 | GB/T455-2002 |

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| Typical electrical properties | Unit of measure | |
|-------------------------------|-----------------|----|
| Nominal thickness | µm | 40 |
| Field intensity | kV/mm | 11 |

| Typical electrical properties | Unit of measure | | | | Test method |
|-------------------------------|-----------------|----|----|-----|-----------------|
| Nominal thickness | µm | 50 | 80 | 130 | |
| Field intensity | kV/mm | 12 | 12 | 12 | GB/T1408.1-2006 |

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