

---

## SynTherm® YT56 DDP

SynTherm® YT56 DDP is a synthetic medium density electro insulation paper constructed of a calendered, aromatic polyamide fibril 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® YT56 is a Class H (180 °C) insulating material. Its mechanical, thermal and electrical properties are between SynTherm® YT510 and SynTherm® YT511.

Temperatures over 200 °C only slightly influence its electrical properties. The good mechanical properties can be extrapolated to significantly higher temperatures. SynTherm® YT56 is also suitable for use at temperatures to -190 °C due to its polymer-structure.

It has a high short-term dielectric strength. SynTherm® YT56 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® YT56 has low flammability (UL 94V-0) and very high resistance to beta and gamma radiation.

---

### Application

SynTherm® YT56 DDP is designed for cost critical applications which require a moderate mechanical and electrical strength.

SynTherm® YT56 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

Film thickness in µm:

130, 180, 250, 300, 510, 760

SynTherm® YT56 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 tape-width, thickness on request

---

## Base

Calandered, aromatic polyamide fibrille 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 10/18



Mechanical	Unit of measure						
Nominal thickness	µm	130	180	250	300	510	760
Typical thickness	µm	130	180	250	300	500	760
Specific weight	g/m <sup>2</sup>	86	125	172	245	342	532
Tensile strength longitudinal	N/cm	100	155	200	300	320	420
Tensile strength transversal	N/cm	40	60	80	145	150	200
Elongation at break longitudinal	%	8	9	9.5	12	11	10
Elongation at break transversal	%	8.5	9.5	10	13	11.5	10
Elmendorf tear strength longitudinal	N	1.5	2.5	3	5.5	11.5	N/A
Elmendorf tear strength transversal	N	3.5	5	6	7	14.5	N/A

Mechanical	Unit of measure	Test method
Nominal thickness	µm	
Typical thickness	µm	GB/T12914-2008

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 10/18



Mechanical	Unit of measure	Test method
Specific weight	g/m <sup>2</sup>	GB/T451.2-2002
Tensile strength longitudinal	N/cm	GB/T12914-2008
Tensile strength transversal	N/cm	GB/T12914-2008
Elongation at break longitudinal	%	GB/T12914-2008
Elongation at break transversal	%	GB/T12914-2008
Elmendorf tear strength longitudinal	N	GB/T455-2002
Elmendorf tear strength transversal	N	GB/T455-2002

Properties of B-stage resin	Unit of measure					
Thickness increase (one side)	µm	10±15 %				
Basic weight increase (both sides)	g/m <sup>2</sup>	5±10 %				
Curing conditions	h	1	3	10	20	30
Curing conditions	°C	130	120	110	100	90
Shelf life		6 months after production				

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 10/18



Electrical	Unit of measure	
Nominal thickness	µm	130
Field intensity	kV/mm	11

Electrical	Unit of measure						Test method
Nominal thickness	µm	180	250	300	510	760	
Field intensity	kV/mm	11	12	15	13	13	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 10/18

