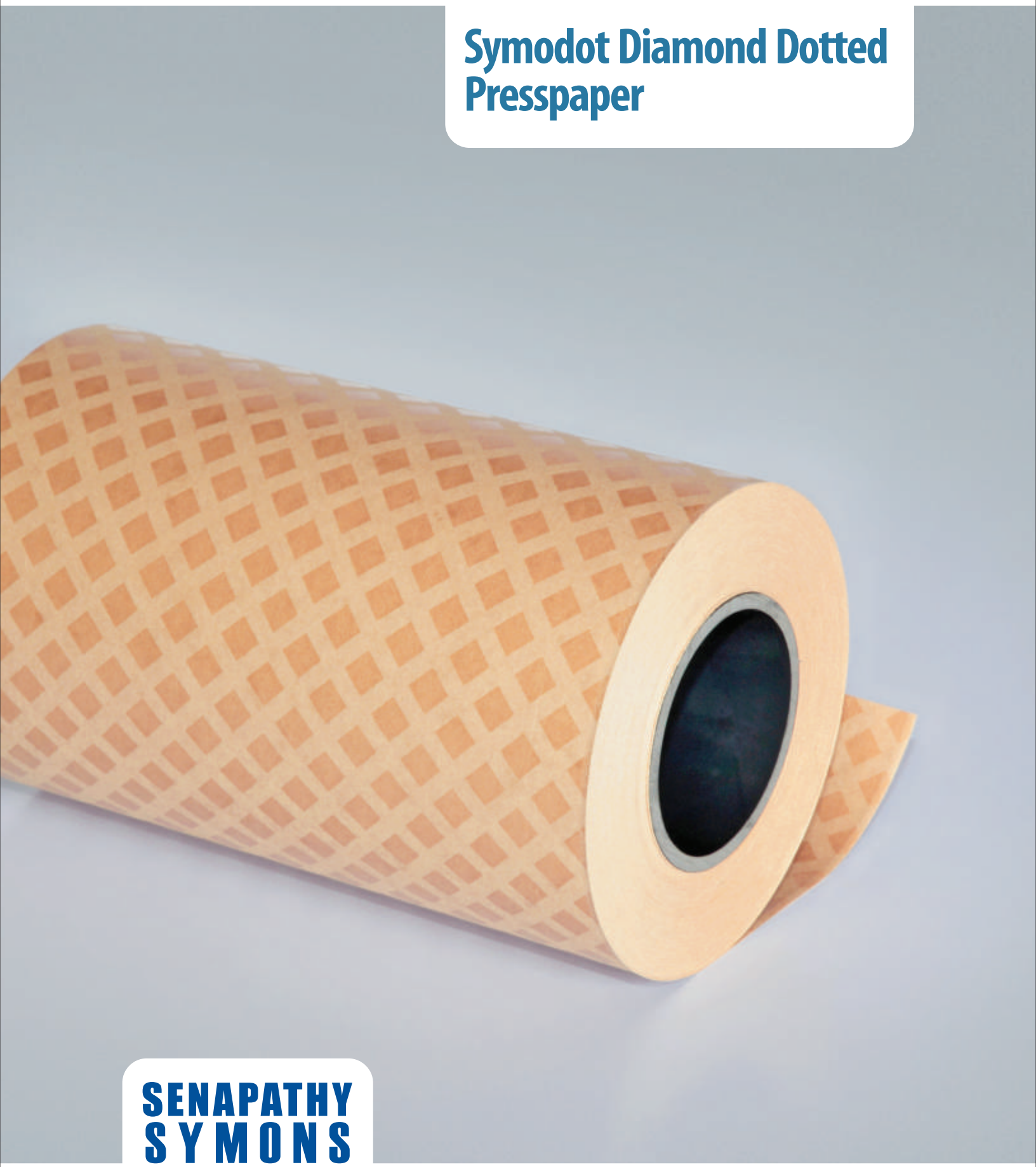
Symodot Diamond Dotted Presspaper



SENAPATHY SYMONS

Symodot

Electrical grade diamond dotted insulating presspaper with thermostable 'B' stage epoxy resin on one side or both sides using special process

Special Features of Symodot

SYMODOT can be used to electrically insulate and mechanically bond winding layers, Conductors, Laminations and Insulation layers.

The thermostable 'B' stage resin dots are applied in such way that enough space exists between them for Oil Impregnation. Normal coating of the Resin is about 10 Micron.

The diamond squares are 9.5mm x 9.5mm and spaced 6.5 mm apart. These squares are arranged such that their diagonals lie parallel and perpendicular to the machine direction of the presspaper and the diagonal of epoxy diamond coatings lie along a straight line. SYMODOT is track free at room temperature and curing after process, provides rigid bonding.

SYMODOT is distinguished by being corona free. This can be used in highly stressed areas in transformers.

Application

SYMODOT can be applied in one or more layers between the parts which should be mechanically connected, through heating in the drying oven. The thin layer of' B' stage resins melts and cures firmly bonding together.

Advantages

Through the use of SYMODOT, the winding layers are stuck together and the complete windings becomes one solid block with considerable improvements in the short circuit strength of such windings.

Quality

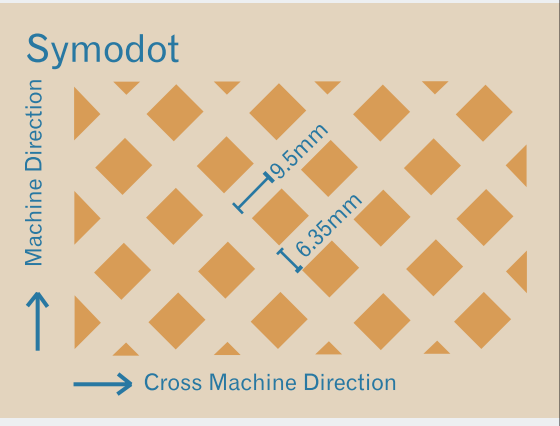
High quality standards are maintained at each stage of manufacture.

Accredited with ISO 9001-2008 by BVQI, Netherlands.

Availability

SYMODOT is available in the thickness of 0.08mm, 0.175mm, 0.25mm and 0.325mm in rolls of width 914mm or 1000mm, can also be supplied in any width, in multiples of 1000mm / 914mm. SYMODOT is normally wound on cardboard cores with 76mm internal diameter.

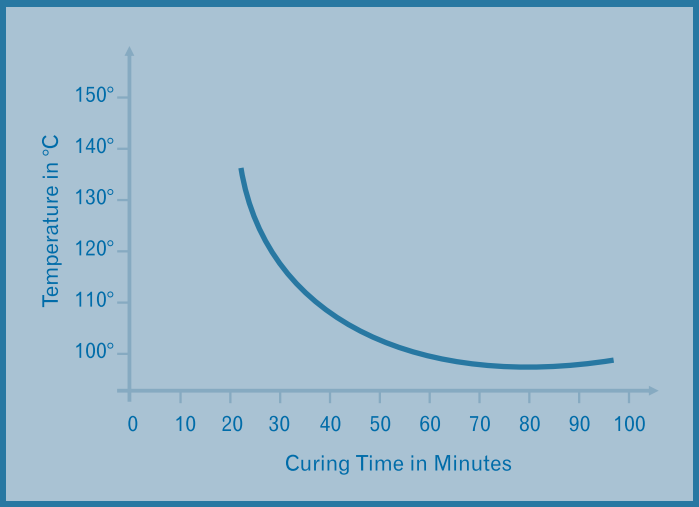
Shelf life – about one year, when stored at room temperature of 20°C and relative humidity 50%.



TECHNICAL PROPERTIES AS PER IEC 60641

SN	Properties		Test method as per IEC 60641-2	Unit	0.10 mm	0.13 mm	0.18 mm	0.25 mm
1	Thickness		Clause 5	mm	0.10+10%	0.13+10%	0.18+10%	0.25+10%
2	Density		Clause 6	g/cm^3	1.0 to 1.2	1.0 to 1.2	1.0 to 1.2	1.0 to 1.2
3	Tensile Strength	MD	Sub Clause 7.2	Mpa	75 Min	75 Min	75 Min	75 Min
		CMD			35 Min	35 Min	35 Min	35 Min
4	Moisture Content		Clause 13	%	8.0 Max	8.0 Max	8.0 Max	8.0 Max
5	Electric Strength in Air		Clause 20	Kv/mm	9 min	9 min	9 min	10 min
6	Electric Strength in oil		Clause 20	Kv/mm	60 min	60 min	60 min	60 min
7	Ash content		Clause 14	%	1.00 Max	1.00 Max	1.00 Max	1.00 Max
8	pH of Aqueous Extract		Clause 16	-	Range 6.0- 9.0	Range 6.0- 9.0	Range 6.0- 9.0	Range 6.0- 9.0
9	Shrinkage	MD	Clause 11	%	1.0 Max	1.0 Max	1.0 Max	1.0 Max
		CMD	-	mm Psi	1.5 Max	1.5 Max	1.5 Max	1.5 Max
10	Thickness of resin layer		-		0.008 to 1.012	0.008 to 1.012	0.008 to 1.012	0.008 to 1.012
11	Tensile shear strength at 100°C		Annexure	Psi	40 min	40 min	40 min	40 min

Curing Cycle Index

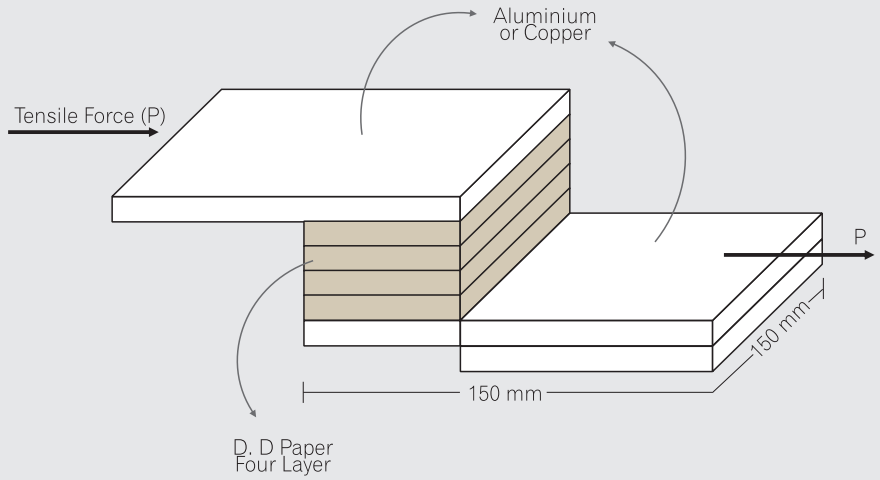


Annexure

Tensile Shear Strength Test

Tensile shear strength is determined on lapped bonded specimen.
The test Specimen is prepared using two cleaned Aluminium or Copper sheet of thickness 0.5 to 1.0 mm, 150 mm long and 50 mm wide.
Cut specimen of 50 mm X 50 mm size and place one over another carefully to form an overlap. Place the metal sheets over four layers of Epoxy Coated Paper so that the specimen shall form of size 50 mm X 50 mm as shown in the figures.

Sample specimen is then bonded at a pressure of 0.0138 Mpa (2PSI) and a temperature of 120°C for one hour. The bonded sample is tested for the shear strength with a pull rate of 150 mm/min(6 inches/min) at 100°C. The separation must occur in the paper layer and not due to the adhesion i.e., the separation shall be of cohesive failure only.



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