DuPont™ Nomex® Type 994-NPT

PRELIMINARY TECHNICAL DATA SHEET

DuPont™ Nomex® Type 994-NPT is a recent development from DuPont.

Type 994-NPT pressboard is available in three thicknesses, ranging from 1.0 to 2.0 mm. The small sheet size previously available for Type 994 (355 x 1500 mm [14 x 59 in.]) limited the applications where this product could be economically applied.

DuPont recently completed a new, patent-pending process that enables the production of larger sheets with similar properties to those produced with our original process, which was developed in the 1980s. For these three thicknesses of pressboard, the new sheet size will be 730 x 2200 mm (29 x 86.5 in.).

Table I shows a comparison of some of the mechanical properties for Type 994-NPT and Type 994. **Table II** compares electrical properties of Type 994-NPT and Type 994 in mineral oil. Material from the new process is expected to meet all specifications from the existing process.

Table I – Mechanical Properties in Air

Property	T994	T994-NPT	T994	T994-NPT	T994	T994-NPT	Test Method
Nominal Thickness (mm)	1.0	1.0	1.5	1.5	2.0	2.0	
Tensile Strength, MD (MPa) Tensile Strength, XD (MPa)	110 90	140 90	110 80	120 100	110 80	120 100	ASTM D828 ASTM D828
Elongation, MD (%) Elongation, XD (%)	21 20	15 15	16 15	13 14	16 15	12 13	ASTM D828 ASTM D828
Shear Strength (MPa)	130	130	120	120	110	110	ASTM D732
Compressibility (%)	1.7	1.2	1.4	1.2	1.2	1.1	ASTM D3394
Compression Set (%)	0.2	0.1	0.2	0.1	0.2	0.1	ASTM D3394

MD = machine direction; XD = cross direction

Table II – Electrical Properties in Mineral Oil

Property	T994	T994-NPT	T994	T994-NPT	Test Method
Nominal Thickness (mm)	1.0	1.0	2.0	2.0	
AC Rapid Rise (kV/mm) Full Wave Impulse (kV/mm)	60 95	68 105	– –	68 110	ASTM D149 ASTM D3426
Dielectric Constant @ 60 Hz, 23°C Dielectric Constant @ 60 Hz, 130°C	3.7 3.9	3.4 3.7	3.4 3.3	3.3 3.2	ASTM D150 ASTM D150
Dissipation Factor @ 60 Hz, 23°C Dissipation Factor @ 60 Hz, 130°C	0.01 0.01	0.01 0.01	0.01 0.01	0.01 0.01	ASTM D150 ASTM D150

ASTM D149, 50 mm electrodes rapid rise, corresponds with IEC 60243-1, subclause 9.1, except for electrode set-up of 50 mm.

DUPONT®

Nomex®

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