Dr. Dietrich Müller GmbH
Zeppelinring 18
D-26197 Ahlhorn

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Laminates

Pertinax® RI 40003

Composition:

Pertinax® RI 40003 is a manufactured phenolic resin and paper sheet laminate and meets the following standards:

IEC 60893	PF CP 206
DIN 7735	HP 2062.8
BS (GB)	5102-1
NEMA L1 (USA)	XXXP
NF C26 (F)	150-P/P0
VSM (CH)	S-PF-CP 4
MIL SPEC	24768/22

Properties:

Pertinax® RI 40003 is insulating up to insulation class E (120°C), furthermore it has very good mechanical properties. In addition to that it is environmentally neutral, free of asbestos, dioxin, cadmium and halogen.

Applications:

Pertinax® RI 40003 is used whenever good mechanical and electrical properties in the low voltage range are required, that means for example for laboratory benches, frontal covering in the inner area and basic plates for control units.

Delivery forms:

Pertinax® RI 40003 is available in thicknesses of 0.3 mm – 90 mm as well as sheet (2440 x 1220 mm and 1150 x 2200 mm with a max. sheet size of 2440 x 1240 mm). Furthermore Pertinax® RI 40003 can also be delivered as cut, milled, die-cut or water-jet cut parts. In addition it can be equipped with a special varnish to meet a CTI of more than 600.

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Standard colour: Pertinax® RI 40003 is delivered in a brown colour and it is also available in a black colour.

Storage conditions: Pertinax® RI 40003 is durable unlimited under normal conditions (20°C, 50% rel. air humidity).

Property	Test method	Unit	Value
Density	ISO 1183 / A	g/cm³	1.3 – 1.4
Elasticity module of flexural test	ISO 178	Mpa	7 x 10³
Tensile strength	ISO 527	Mpa	70
Limiting temperature	IEC 216	°C	120
Comparative tracking index	DIN / IEC 112	CTI	100
Thermal conductivity	DIN 52612	W/mK	0.2
Thermal class	IEC Publ.85	Level	E
Water absorption (5mm)	ISO 62 / 1	mg	125
Flexural strength untreated at 23°C	DIN 53452	MPa	80
Impact resistance a_{n10} and a_{n15}	DIN 53453	kJ/m²	8
Notch impact resistance a_{k10}	DIN 53453	kJ/m²	2.5
Notch impact resistance a_{k15}	DIN 53453	kJ/m²	5
Pressure resistance	DIN 53454	MPa	120
Splitting strength	DIN 53463	N	2000
Resistance between plugs after 24 hours water storage at 23°C	DIN 53482	Ohm	10^{10}
1 Minute test voltage in layer direction at 90°C after pre-treatment	DIN 53481	kV	25
1 Minute test voltage vertical to layer at 90°C after pre-treatment	DIN 53481	kV	30
Dielectric dissipation factor tan d 50 Hz 96 hours 105°C	DIN 53483	max.	0.08

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Property	Test method	Unit	Value
Dielectric constant	DIN 53483	-	5
Coefficient of linear expansion	VDE 0304/2	10-10 /K	20 – 40
Limiting value of limiting temperature according to flexural strength	-	MPa	40
Incandescence resistance	DIN 53459	Level	2a

Thickness	0.3	0.5	0.8	1.0	1.5	2.0	2.5	3.0	3.5	4.0
Availability	○	●	●	●	●	●	●	●	●	●

Thickness	4.5	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0
Availability	●	●	●	●	●	●	●	●	●	●

Thickness	14.0	15.0	16.0	17.0	18.0	19.0	20.0	21.0	22.0	25.0
Availability	●	●	●	●	●	●	●	●	●	●

Thickness	30.0	35.0	40.0	45.0	50.0	60.0	70.0	80.0	90.0	100.0
Availability	●	●	●	○	○	○	○	○	○	○

● **Pre-material on stock**

○ **Delivery time pre-material 2 weeks**

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Please note:

The information in this data sheet is based on our current knowledge and experience. They do not disengage the fabricator and user from own tests and inspections because of the plenty of possible effects. There is no judicial binding assurance of certain properties or of the qualification for a concrete application in our declaration. We recommend consulting us in individual cases. The acceptor of our products has to observe possible industrial property rights as well as present laws by himself