

Laminates

Pertinax® RI 40001

Composition: Pertinax® RI 40001 is a manufactured phenolic resin and paper sheet laminate and meets the following standards:

IEC 60893	PF CP 202
DIN 7735	HP 2061.5
BS (GB)	5102-2
NEMA L1 (USA)	XX
NF C26 (F)	150-Pa
VSM (CH)	S-PF-CP 2
MIL SPEC	24768/11

Properties: Pertinax® RI 40001 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. Pertinax® RI 40001 is designed in accordance with flammability class UL 94 level HB.

Applications: Pertinax® RI 40001 is used for laboratory benches, frontal covering in the inner area and basic plates for control units. Pertinax® RI 40001 is used for motors, generators, oil-filled distribution transformers, traction transformers and for the tube production.

Delivery forms: Pertinax® RI 40001 is available in thicknesses of 0.5 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 40001 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 an CTI of more than 600.

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Standard colour: Pertinax® RI 40001 is delivered in a brown colour and it is also available in a black colour.

Storage requirements: Pertinax® RI 40001 is durable 6 months by storage at 22°C.

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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Property	Test method	Unit	Value
Density	ISO 1183 / A	g/cm ³	1.3 – 1.4
Elasticity module of flexural test	ISO 178	Mpa	7 x 10 ³
Tensile strength	ISO 527	Mpa	100
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	350
Notch impact resistance ak10	DIN 53453	kJ/m ²	15
Notch impact resistance ak15	DIN 53453	kJ/m ²	4
Pressure resistance, parallel to laminate	DIN 53454	N/mm ²	150
Splitting strength	DIN 53463	N	2000
Dielectric strength, parallel to laminate,90°C in oil	DIN 53481	kV	40
Dielectric strength, vertical to laminate,90°C in oil	DIN 53481	V	100
Flexural strength untreated at 23°C	DIN 53452	MPa	130
Impact resistance an10 and an15	DIN 53453	kJ/m ²	20
Pressure resistance	DIN 53454	MPa	150
1 Minute test voltage in layer direction at 90°C after pre-treatment	DIN 53481	kV	40
1 Minute test voltage vertical to layer at 90°C after pre-treatment	DIN 53481	kV	40
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	65
Incandescence resistance	DIN 53459	Level	2b
Dielectric dissipation factor tan d – 50 Hz 96 hours 105°C	DIN 53483	Max.	0.05

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Trademark Information: Pertinax® is a registered trademark of the company Dr. Dietrich Müller GmbH, Germany.

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.
