

## Laminates

### Pertinax® RI 40005

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**Composition:** Pertinax® RI 40005 is a manufactured phenolic resin and paper sheet laminate and meets the following standards:

IEC 60893	PF CP 204
DIN 7735	HP 2063
BS (GB)	5102-4
NEMA L1 (USA)	XXXPC
NF C26 (F)	150-PPP0
VSM (CH)	S-PF-CP 4
MIL SPEC	24768/23

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**Properties:** Pertinax® RI 40005 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.

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**Applications:** Pertinax® RI 40005 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.

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**Delivery forms:** Pertinax® RI 40005 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 40005 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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## Pertinax® RI 40005

**Standard colour:** Pertinax® RI 40005 is delivered in a brown colour and it is also available in a black colour.

**Storage conditions:** Pertinax® RI 40005 is durable unlimited under normal conditions (20°C, 50% rel. air humidity).

Property	Test method	Unit	Value
Density	ISO 1183 / A	g/cm <sup>3</sup>	1.3 – 1.4
Elasticity module of flexural test	ISO 178	Mpa	7 x 10 <sup>3</sup>
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	Stufe	E
Water absorption (5mm)	ISO 62 / 1	mg	70
Flexural strength untreated at 23°C	DIN 53452	MPa	80
Impact resistance a <sub>n10</sub> and a <sub>n15</sub>	DIN 53453	kJ/m <sup>2</sup>	7
Notched impact resistance a <sub>k10</sub>	DIN 53453	kJ/m <sup>2</sup>	2.5
Resistance between plugs after 24 hours water storage at 23°C	DIN 53482	Ohm	10 <sup>10</sup>
1 Minute test voltage in layer direction at 90°C after pre-treatment	DIN 53481	kV	20
1 Minute test voltage vertical to layer at 90°C after pre-treatment	DIN 53481	kV	25
Dielectric dissipation factor tan d 50 Hz 96 hours 105°C	DIN 53483	max.	0.05
Dielectric constant	DIN 53483	»	5
Coefficient of linear expansion	DIN 53489	max.	AN 1.4
Limiting value of limiting temperature according to flexural strength	VDE 0304/2	10 <sup>-10</sup> /K	20 - 40
Incandescence resistance	-	MPa	40
Resistance between plugs after 24 hours water storage at 23°C	DIN 53459	Stufe	2b

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## Pertinax® RI 40005

<b>Thickness</b>	0.3	0.5	0.8	1.0	1.5	2.0	2.5	3.0	3.5	4.0
<b>Availability</b>	○	●	●	●	●	●	●	●	●	●

<b>Thickness</b>	4.5	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0
<b>Availability</b>	●	●	●	●	●	●	●	●	●	●

<b>Thickness</b>	14.0	15.0	16.0	17.0	18.0	19.0	20.0	21.0	22.0	25.0
<b>Availability</b>	●	●	●	●	●	●	●	●	●	●

<b>Thickness</b>	30.0	35.0	40.0	45.0	50.0	60.0	70.0	80.0	90.0	100.0
<b>Availability</b>	●	●	●	○	○	○	○	○	○	○

- Pre-material on stock
- Delivery time pre-material 2 weeks

**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