

Laminates

Rigidiso® RI 40405

Composition: Rigidiso® RI 40405 is a sheet laminate made of an epoxy resin matrix and glass filament mat and complies with the standard types:

IEC 60893 EP GM 203
NF C26 (F) 153-VmEM2

Properties: Rigidiso® RI 40405 is insulating up to insulation class H (180°C), furthermore it has very good mechanical properties. In addition to that it is environmentally neutral, free of asbestos, dioxin, cadmium and halogen. Rigidiso® RI 40405 is designed in accordance with flammability class UL 94 level HB.

Applications: Rigidiso® RI 40405 is used whenever good mechanical and electrical properties are required. Like for example at electrical constructions, distribution boxes, rail supports, etc.

Delivery forms: Rigidiso® RI 40405 is available in thicknesses of 0.15 mm – 150 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 Rigidiso® RI 40405 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.

Standard colour: Rigidiso® RI 40405 is delivered in brown colour and is also available in black colour.

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Storage conditions: Rigidiso® RI 40405 can be stored unlimited under normal conditions (20°C, 50% rel. air humidity).

Property	Test method	Unit	Value
Density	ISO 1183/A	g/cm ³	1.85
Elasticity module of flexural test	ISO 178	Mpa	18000
Tensile strength	ISO 527	Mpa	280
Pressure resistance vertical to layer	ISO 604	Mpa	450
Dielectric strength at 90°C vertical to layer	IEC 243	KV/mm	13
Dielectric strength at 90°C parallel to layer	IEC 243	kV	70
Thermal long-term behaviour	IEC 216	T.I.	180
Water absorption (3mm)	ISO 62 / 1	Mg	/
Impact resistance a _{n10} und a _{n15}	DIN 53453	kJ/m ²	90
Flexural strength untreated at 23°C	DIN 53452	MPa	360
Notched impact resistance a _{k10}	DIN 53453	kJ/m ²	50
Resistance between plugs after 24 hours water storage at 23°C	DIN 53482	Ohm	5 x 10 ⁹
1 Minute test voltage in layer direction at 90°C after pre-treatment	DIN 53481	kV	70
1 Minute test voltage vertical to layer at 90°C after pre-treatment	DIN 53481	kV	40
Dielectric dissipation factor tan d – 50 Hz 96 hours 105°C 1 MHz 24 hours water storage	DIN 53483	max.	0.05

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Property	Test method	Unit	Value
Dielectric constant	DIN 53483	-	5
Comparative tracking index	IEC 112	CTI	150
Thermal conductivity	DIN 52612	W/m*k	0.35
Coefficient of linear expansion	VDE 0304/2	10 ⁻⁶ /K	10 – 20
Limiting temperature	VDE 0304/2	°C	180
Flammability	UL 94	-	HB
Thermal class	IEC Publ. 85	-	H
Incandescence resistance	DIN 53459	Level	2a
Water absorption – 4 mm thick	DIN 53495	Mg	< 100

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

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

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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

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