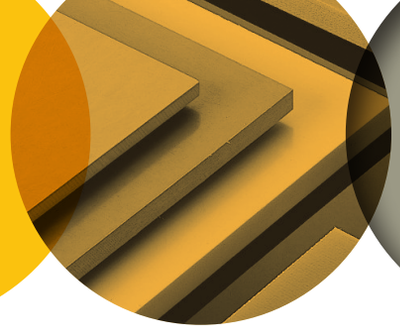
Röchling
Grade MII/2 E3
LIGNOSTONE® TRANSFORMERWOOD®
Insulation components for oil filled transformers



MII/2 E3
Lignostone®
Transformerwood®

GENERAL DESCRIPTION

Lignostone® Transformerwood® is a laminated densified wood, specially developed for use in transformers. Manufactured from red beech veneers which are joined together with thermosetting synthetic resins under high pressure and heat. It displays good electrical and mechanical characeristics as an insulation material in oil-filled transformers. Manufacturered from sustainable forests only grown in Europe, the peeled veneers are subject to stringent quality measures.

FEATURES & BENEFITS

- Good electrical insulation properties
- High mechanical strength at low specific density
- Easy and fast to dry
- High oil absorption

APPLICATIONS

- Coil clamping rings
- Platforms
- Pressure beams
- Lead and cleat support
- Step blocks
- Shield rings and potential rings
- Pressure blocks
- Fasteners

GENERAL INFORMATION	
Material	Densified laminated wood with thermoset phenolic resins
Colour	Natural
Specification	C4R, KP 20224 @ 1.1 g/cm^3 density

TECHNICAL DATA	TEST METHOD	UNITS	VALUE
General			
Oil absorption	IEC 61061	%	~15
Mechanical Properties			
Specific gravity	DIN 53479	g/cm³	1.1
Modulus of elasticity in flexure	ISO 178	N/mm²	10,000
Compressive strength (perpendicular)	ISO 604	N/mm²	210
Compressive strength (parallel)	ISO 604	N/mm²	80
Flexural strength (parallel and perpendicular)	ISO 178	N/mm²	130
Tensile strength (parallel)	ISO 527	N/mm²	90
Impact strength RT (perpendicular)	ISO 179	kJ/m²	25
Impact strength RT (parallel)	ISO 179	kJ/m²	20

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VERSATILITY VIA COLLABORATION

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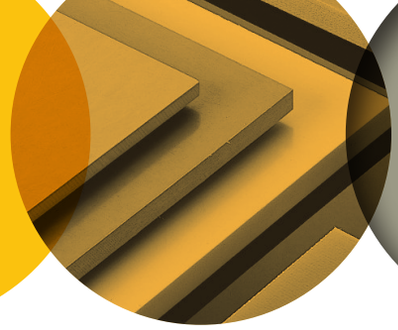

MII/2 E3
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TECHNICAL DATA	TEST METHOD	UNITS	VALUE
Thermal Properties			
Thermal conductivity at 20°C	DIN 52612	W/mK	ca. 0.22
Operating temperatures continuous		°C	105
Temperature limit when drying and oil impregnating		°C	130
Electrical Properties			
Electrical strength at 20°C (parallel)	IEC 60243	kV/25mm	60
Electrical strength at 90°C (parallel)	IEC 60243	kV/25mm	50
Dielectric loss factor at 50 Hz 20°C	DIN 53483	tan alpha	0.02
Volume resistivity	IEC 60093	Ω x cm	10^{12}
Track resistance	IEC 60112		CTI 225

MATERIAL SPECIFICATIONS
Standard Width x Length (mm)
1300 x 2000
1500 x 1500
Standard Nominal Thickness (mm)
25 to 100

SIZING & AVAILABILITY

The above table shows the most commonly requested products in this range. Should you require something outside of these parameters, please contact your local sales representative or our customer service team.

MACHINING & FABRICATION

Insulect's manufacturing capabilities form a key part of the trusted service we offer our customers. Our two modern, well equipped facilities – in Brisbane and Melbourne – work with a wide range of electrical, thermal and mechanical materials – including plastics, composites and cellulose-based products.

We offer short run, specialty or volume based machining and fabrication for almost any application and can produce cut-to-order sheets or finished components. Coupled with our highly-trained and experienced team, we are able to deliver on the most complex of customer requirements.

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