Technical Data Sheet

Lignostone® M X-2-E3-HQ

Laminated Densified Wood

Typical characteristics

- High mechanical strength at medium density
- High red beech veneer quality; tangential stacked
- Laminated densified wood T4R according to the standard IEC 61061

Typical industries

- Oil-filled transformers
- Electrical Insulating Components
- 전기 산업

	Test method	Unit	Guideline value
Mechanical properties			
Density	ISO 1183	g / cm^3	1.25
Flexural strength [1) ⊥]	ISO 178	MPa	180
Modulus of elasticity in flexion ⊥	ISO 178	GPa	13 000
Compressive strength ⊥	ISO 604	MPa	140
Compressive strength II RT	ISO 604	MPa	100
Shear strength II	IEC 61061	MPa	15
Thermal properties			
Thermal conductivity	DIN 52612	W/m K	0.22
Operating temperature		°C	105
Temperature limit when drying	DIN 7707	°C	130
Physical properties			
Oil absorption	IEC 61061	%	7
Moisture content	IEC 61061	%	5
Dielectrical properties			
Electric strength 90°C under oil ⊥	IEC 61061	kV / mm	17
Electric strength 90°C under oil II	IEC 61061	kV/25mm	80
Relative permittivity (50 Hz)	IEC 60250	ε_r	4.1
Dielectric loss factor (50 Hz)	IEC 60250	tan δ	0.01

	Test method	Unit	Guideline value
Specific volume resistance	IEC 60093	Ω x cm	10^{12}

⊥ = perpendicular to the lamination II = parallel to the lamination

[1)] Sample size for flexural strength and modulus of elasticity in flexure is 120 x 15 x 10 mm (Mechanical value depends on the average ring diameter)