

# **MNL010**

#### **Material Datasheet**

# Material Description & Properties

#### Mechanical properties of the core material

Density (Kg/m³)	ISO 7322	120-180
Compressive strenght (MPa)	ASTM C365	0,3*
Compressive modulus (MPa)	ASTM C365	5,1*
Tensile strenght (MPa)	ISO 7322	>0,2
Shear strenght (MPa)	ASTM C273	0,9*
Shear modulus (MPa)	ASTM C273	5,9*
Thermal conductivity (W/mK)	ISO 8301	0,048*
Loss factor (at 1Hz)	ASTM E756	0,022*

### Mechanical properties of the core material in a composite (1)

Flexural strenght at yield (MPa)	ASTM D790	37*
Flexural modulus (GPa)	ASTM D790	3,5*
Shear strenght at yield (MPa)	ASTM C392	0,8*
Shear modulus (MPa)	ASTM C392	44*
Compressive strenght at yield (MPa)	ASTM C365	1,2*
Compressive modulus (MPa)	ASTM C365	19*
Water absorption (%)	ASTM C272	<4*
Panel density	-	0,600*

 $<sup>^{(1)}</sup>$  Samples made by Infusion (0.6 bar) with epoxy resin ref. SR8100/cat ref. SD8824 and two layers of 300g/m glass fibre roving, on each side, sandwich thickness: 6,5 mm; cure at 60°C; samples tested after 5 days of  $^2$  manufacturing. \* Typical values

Flexibility and excellent conformability make **MNL010** possible to be easily integrated into fast production cycles. This product can be processed by hand layup, vacuum bagging and infusion processes and will withstand manufacturing temperatures up to 150°C.

The unique properties of **MNL010** such as: a closed air filled cell structure, low water absorption, rot resistance and high level of noise and vibration attenuation make it an excellent core material for the composites industry - perfectly aligned with the new green classifications.

## **Key features**

- Good drapeability
- Print blocking capability
- Stable material

1.1.1.4

- Lower resin consumption
- Resin compatibility (Excelent for: Epoxy, Polyester, Phenolic, Vynilester and Polyurethane)

Lightweight	
Thermal insulation	
Vibration damping	

Sustainable and energy efficient

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