



# MNLO25

## Material Datasheet

### Material Description & Properties

#### Mechanical properties of the core material

|                              |            |         |
|------------------------------|------------|---------|
| Density (Kg/m <sup>3</sup> ) | ASTM C271  | 220-260 |
| Compressive strength (MPa)   | ASTM C365  | 0,6*    |
| Compressive modulus (MPa)    | ASTM C365  | 6,9*    |
| Tensile strength (MPa)       | ASTM C273  | 0,7*    |
| Shear strength (MPa)         | ASTM C273  | 1,0*    |
| Shear modulus (MPa)          | ASTM C273  | 6,0*    |
| Thermal conductivity (W/mK)  | ASTM E1530 | 0,046*  |
| Loss factor (at 1Hz)         | ASTM D5023 | 0,086*  |

#### Mechanical properties of the core material in a composite <sup>(1)</sup>

|                                     |           |        |
|-------------------------------------|-----------|--------|
| Flexural strength at yield (MPa)    | ASTM D790 | 63*    |
| Flexural modulus (GPa)              | ASTM D790 | 4,3*   |
| Shear strength at yield (MPa)       | ASTM C392 | 0,9*   |
| Shear modulus (MPa)                 | ASTM C392 | 38*    |
| Compressive strength at yield (MPa) | ASTM C365 | 2,5*   |
| Compressive modulus (MPa)           | ASTM C365 | 26*    |
| Water absorption (%)                | ASTM C272 | <4*    |
| Panel density                       | -         | 0,630* |

<sup>(1)</sup> Samples made by Infusion (0,6 bar) with epoxy resin ref. SR8100/cat.ref. SD8824 and two layers of 300g/m<sup>2</sup> glass fibre roving, on each side, sandwich thickness: 6,5 mm; cure at 60°C; samples tested after 5 days of manufacturing. \* Typical values

Flexibility and excellent conformability make **MNLO25** 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 **MNLO25** 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
- Lower resin consumption
- Resin compatibility (Excellent for: Epoxy, Polyester, Phenolic, Vynilester and Polyurethane)

#### Lightweight



#### Thermal insulation



#### Vibration damping



#### Sustainable and energy efficient



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