CORECORK

AMORIM
CORK COMPOSITES

NL20

Material Data Sheet

Flexibility and excellent conformability make **NL20** 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 150ºC.

The unique properties of **NL20** 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 material for to the composites industry - perfectly aligned with the new green classifications.

MECHANICAL PROPERTIES OF THE CORE MATERIAL		
DENSITY (Kg/m^3)	ASTM C271	170-235
COMPRESSIVE STRENGHT (MPa)	ASTM C365	0,5*
COMPRESSIVE MODULUS (MPa)	ASTM C365	6,0*
TENSILE STRENGHT (MPa)	ASTM C297	0,7*
SHEAR STRENGHT (MPa)	ASTM C273	0,9*
SHEAR MODULUS (MPa)	ASTM C273	5,9*
THERMAL CONDUCTIVITY (W/mK)	ASTM E1530	0,044*
LOSS FACTOR (at 1KHz)	ASTM E756	0,043*

MECHANICAL PROPERTIES OF THE CORE MATERIAL IN A COMPOSITE [1]		
FLEXURAL STRENGHT AT YIELD (MPa)	ASTM D790	56*
FLEXURAL MODULUS (GPa)	ASTM D790	4*
SHEAR STRENGHT AT YIELD (MPa)	ASTM C392	0,9*
SHEAR MODULUS (MPa)	ASTM C392	41*
COMPRESSIVE STRENGHT AT YIELD (MPa)	ASTM C365	2,2*
COMPRESSIVE MODULUS (MPa)	ASTM C365	23*
WATER ABSORPTION (%)	ASTM C272	<4*
PANEL DENSITY	-	0,560*

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

Lightweight

Vibration damping

Thermal insulation

Sustainable and energy efficient

KEY FEATURES

- Good drapeability
- Print blocking capability
- Stable material
- Lower resin consumption
- Resin compatibility (Excelent for: Epoxy, Polyester, Phenolic, Vynilester and Polyurethane)

PROCESS GUIDELINES	
RESIN UPTAKE (*) (per m^2 at 1mm)	170g
MAXIMUM PROCESSING TEMPERATURE	180ºC
VACUUM BAG PROCESSING	up to 150ºC
AUTOCLAVE CURE PROCESSING	possible
COEFFICIENT OF THERMAL EXPANSION (ASTM E831-06)	aprox. 110 X 10-6/ºC at RT

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