STACK

BUILDING FASTER, CHEAPER AND BEYOND CONCRETE.

STACK raises the bar for load-bearing materials everywhere. Engineered from laminated veneer lumber and infused with resin for exceptional strength, it outperforms concrete and steel.

- Unique **weight-to-strength ratio**
- Astounding **mechanical properties**
- Great **dimensional stability**

4,8x
STRONGER THAN CONCRETE IN COMPRESSION

2x
FASTER TO INSTALL THAN PRECAST CONCRETE SOLUTION

3x
LIGHTER THAN CONCRETE

MATERIAL SPECIFICATIONS

SPECIES : Treated poplar, rotary cut

DENSITY: 1100 kg/m^3

WOOD WEIGHT FRACTION: 60 wt%

RESIN TYPE: Acrylic

IMMERSION: Waterproofing (slow rate of absorption, high dimensional stability)

DIMENSIONAL SPECIFICATIONS

MAXIMUM SIZE: Up to 6 m

MAXIMUM WIDTH: Up to 200 mm

THICKNESS: 15-30 mm

MECHANICAL PROPERTIES *(internal data, certifications in progress)*	STACK
SHORE D HARDNESS / (ISO 48-4:2018)	80
TENSILE STRENGTH $f_{t,0,k}$ / Parallel to grain / (ISO 527)	180 MPa
TENSILE STRENGTH $f_{t,90,k}$ / Perpendicular to grain / (ISO 527)	16 MPa
FLEXURAL MODULUS $E_{0,g,mean}$ / Flatwise / Parallel to grain	20 GPa
FLEXURAL STRENGTH $f_{m,k}$ / Flatwise /Parallel to grain	180 MPa
SHEAR STRENGTH $f_{v,k}$ / Flatwise / Parallel to grain	36 MPa
COMPRESSIVE STRENGTH $f_{c,0,k}$ / Edgewise /Parallel to grain	180 MPa
PERPENDIDULAR COMPRESSIVE STRENGTH $f_{c,90,k}$ / Edgewise / Perpendicular to grain	70 MPa

PROCESSING GUIDELINES :

TECHNICAL SOLVENT: Isopropanol

MACHINING : Digital cutting (CN), drilling, sanding, polishing. Ideal setting: rotation 15000rpm, feed 800mm/min)

NOTE : The data presented in this document is for informational purposes only and is believed to be reliable. We are not assuming responsibility for the results obtained by others over whose methods we have no control. Tests were conducted on 150X150mm formats. Data are average values.