DuraKore® Strip Planks are specifically designed for strip plank construction where stiffness, strength and durability need to be maximised at minimum weight and cost.

DuraKore® Strip Planks are 300mm wide and 2400mm long, manufactured with BALTEK®SB 150 kg/m³ end-grain balsa laminated with a 1.3 mm Gaboon veneer, providing a strength-to-weight ratio superior to any traditional method of one-off construction.

DuraKore® requires a far less elaborate mold or frame system and significantly reduces the material, labour and disposal costs associated with building conventional molds, or prototype tooling.

End grain balsa has an extremely high strength-to-weight ratio, excellent mechanical properties, good thermal and sound insulation properties, high impact and fatigue resistance, and good moisture resistance.

Typical applications include one-off composite boat-building, conversions or repair work, prototypes, and tooling for all transportation and industrial markets.

RIGID END-GRAIN SHEET PROPERTIES

Nominal Density	(ASTM C-271)	150 kg/m³	9.4 lb/ft³
Tensile Strength perpendicular to the plane	(ASTM C-297)	13.0 MPa	1886 psi
Tensile Modulus perpendicular to the plane	(ASTM C-297)	3.52 GPa	510 ksi
Compressive Strength perpendicular to the plane	(ASTM C-365)	12.67 MPa	1837ksi
Compressive Modulus perpendicular to the plane	(ASTM C-365)	3.92 GPa	568 ksi
Shear Strength	(ASTM C-273)	2.94 MPa	427 psi
Shear Modulus	(ASTM C-273)	159 MPa	22.8 ksi
Thermal Conductivity @ 24°C(75°F)	(ASTM C-177)	0.066 W/m.°K	0.453 Btu.in/hr.ft².°F
Linear Coefficient of Thermal Expansion	-Tangential	18.9 x 10^{-6}m/m/°C	10.5 x 10^{-6}in/in/°F
	-Radial	12.6 x 10^{-6}m/m/°C	7.0 x 10^{-6}in/in/°F
	-Longitudinal	3.06 x 10^{-6}m/m/°C	1.7 x 10^{-6}in/in/°F

Typical Poisson's Ratio: $\upsilon_{LR}=0.23$ $\upsilon_{LT}=0.49$ $\upsilon_{RT}=0.67$ $\upsilon_{TR}=0.23$ $\upsilon_{RL}=0.02$ $\upsilon_{TL}=0.02$

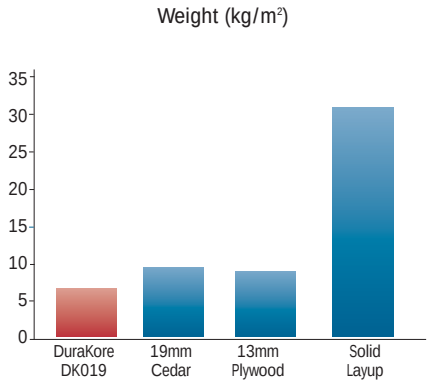
Please Note: The first letter of the subscript refers to the direction of the applied stress. The second letter of the subscript refers to the direction of the lateral deformation.

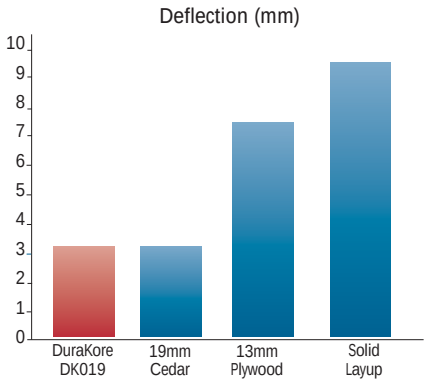
GABOON PROPERTIES

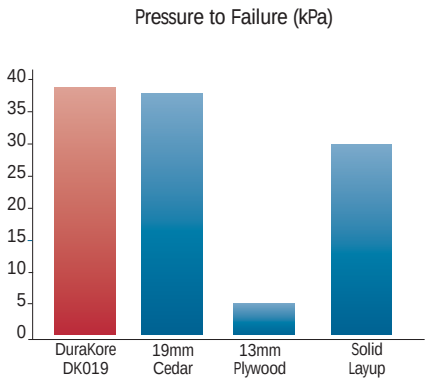
Density	440 kg/m³ at 12% moisture content
Modulus of Elasticity	9690 MPa
Crushing Strength	36 MPa
Static Bending Strength	62 MPa
Monnin Hardness	1.6
Colour	Light Red
Texture	Fine
Grain	Straight & Interlocked

MATERIAL COMPARISONS	Weight (kg/m²)	Deflection (mm)	Pressure to Failure (kPa)
19mm DuraKore/ T750 each side	7.6	3.2	38
19mm Cedar / T750 each side	9.5	3.2	37
13mm Plywood	8.1	7.4	5
Solid Layup 9x C600+M225	31.4	9.5	30

FLEXURAL BENDING TEST RESULTS







JOINING & BONDING

After un-packing, pre-coat both sides with WEST SYSTEM® brand epoxy resin/hardener mix to stabilize the moisture content of the plank.

To offset the individual length of the panel, DuraKore® Strip Planks are supplied with both narrow edges pre-machined to facilitate joining them to the desired length. A high density epoxy adhesive is specified for joining the DuraKore® scarf joints. (Contact ATL Composites for suitable adhesives.)

After joining, the planks are ripped into strips which will easily bend and conform over temporary frames to form the compound shape.

A low density epoxy adhesive is specified for edge-gluing the DuraKore® planks.

STANDARD STOCK DURAKORE

Order Code*	Plank Thickness	Nominal Weight kg/m²
DK009	9 mm	3.0
DK013	13 mm	3.7
DK016	16 mm	4.2
DK019	19 mm	4.6
DK025	25 mm	5.6
DK030	30 mm	6.1

*** Example** - order number for a 13mm DuraKore® Strip Plank is DK013

Plank size - 300mm x 2400mm

CUTTING DURAKORE

DuraKore® Strip Planks are easily cut and shaped with ordinary woodworking tools, such as hand saws, planes, wood chisels and rasps. Necessary power tools include a circular saw, a disc sander, and electric drill and a belt-sander.

STORAGE

DuraKore® Strip Planks should be stored flat and kept dry and clean.

All timber used in the manufacture of DuraKore® Strip Planks is plantation grown. ATL Composites reserves the right to alter specifications without prior notice. Weight may vary due to variations in core density.

NOTE Our products are intended for sale to industrial and commercial customers. We request that customers inspect and test our products before use and satisfy themselves as to contents and suitability. Nothing herein shall constitute a warranty, express or implied, including any warranty or merchantability or fitness, nor is protection from law or patent to be inferred. All patent rights are reserved. The exclusive remedy for all proven claims is replacement of our materials and in no event shall we be liable for special or consequential damages. 22/10/09

ATL composites

ATL composites Pty Ltd
Tel (+61) 7 5563 1222
Fax (+61) 7 5563 1585
info@atlcomposites.com
www.atlcomposites.com