





## THERMALLY ENHANCED AYOUS




<b>Mechanical Properties, Strength values</b>		<b>Ayous, Kiln-dried</b>	<b>Thermally Enhanced Ayous</b>
Modules of elasticity (MOE), flatwise (MPa-N/mm <sup>2</sup> ) DIN EN 408, TS 2478		5,800	5200
Modules of rupture (MOR), flatwise (MPa) DIN EN 408, TS 2474		64	40
Impact bending strength (IBS), flatwise (MPa) TS 2477		-	-
Compressive strength (CS),(MPa) TS 2595		-	-

<b>Dimensional Stability 65%Rh 20°C</b> <i>(Increased Stability)</i> <i>(Minimized deformations)</i> <i>(Minimized Expansion and Shrinkage)</i>		<b>Ayous, Kiln-dried</b>	<b>Thermally Enhanced Ayous</b>
Change in Length swelling (mm/m) TS 4083, 4084		0,65	0,38
Change in Length shrinkage (mm/m) TS 4083, 4084		0,30	0,25
Change in Thickness swelling (mm/m) TS 4083, 4084		0,90	0,26
Change in Thickness shrinkage (mm/m) TS 4083, 4084		0,80	0,20

<b>Physical Properties, Moisture content</b>		<b>Ayous, Kiln-dried</b>	<b>Thermally Enhanced Ayous</b>
Equilibrium moisture content at 20/65 (%) EN 13183-1		11 (9-12)	4.6 (4-7)
Raw density at 20/65 (kg/m <sup>3</sup> ) DIN 52182		490	430

**Biological durability against wood-decaying basidiomycetes**

*(Increased durability to decay)  
(Resins and sugars removed)  
(Low moisture content prevents decay and fungi growth)*


**Ayous, Kiln-dried**
**Thermally Enhanced Ayous**

Preliminary durability classification  
Median mass loss (< 5 %)  
CEN/TS 15083-1

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Class 2

**Nail and screw holding strength**

*(screw withdrawal strength)*


**Ayous, Kiln-dried**
**Thermally Enhanced Ayous**

**a.** Stainless steel or galvanised screws and plastics clips are recommended.  
Hidden and face fixing systems  
EN 1383, NEN 6562  
**b.** Steel material standard 10088-3

1.800 N

907 N

**Glueing**

**Ayous, Kiln-dried**
**Thermally Enhanced Ayous**

Fingerjoints  
Laminations  
Panel production

-

MUF, Polyuretane

**Brinell Hardness**

**Ayous, Kiln-dried**
**Thermally Enhanced Ayous**

HB10/100

1,3

0,95

**Emissions**

**Ayous, Kiln-dried**
**Thermally Enhanced Ayous**

The emissions are not harmful in fresh air.

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OK

The smell of thermowood products may disappear within a few days but with the surface treatment or rain it may raise up again.

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Short Time

**Thermal conductivity, Insulation**

*(Decreased Thermal Conductivity)*


**Ayous, Kiln-dried**
**Thermally Enhanced Ayous**

Heat conductivity W/mK  
TS EN 12667

1,2

0,099

**Colour**

**Ayous, Kiln-dried**
**Thermally Enhanced Ayous**

Colour of the wood changes  
(Ayous colour is dark brown)

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OK


Oil and water based coatings

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OK



<b>Environment</b> <i>(100 % naturel)  (recycleable)  (from renewable forests)</i>		<b>Ayous, Kiln-dried</b>	<b>Thermally Enhanced Ayous</b>
100 % naturel		-	OK
100 % recyclable and biodegradable		OK	OK
Low processing energy demand		OK	OK
Sustainable development and a low carbon future		OK	OK

<b>Healty and safety</b>		<b>Ayous, Kiln-dried</b>	<b>Thermally Enhanced Ayous</b>
Definitely naturel and harmless. Free of chemicals.		OK	OK
Completely healthy.		OK	OK
Improving the stability and durability of wood without using any persistent toxic chemicals		OK	OK