

## **GRADES AND SPECIFICATION**

At our mill in Wicklow, we re-saw and grade all boards prior to machining. **DuraWood®** is supplied to the following specification:

- Graded to B\$1186-3 Part 4 Class CSH; a clear grade of tropical hardwood
- Very occasional tight live knots having a maximum 6mm diameter
- Both faces totally free of resin pockets
- Straight grain, even texture
- Durability class 1-2
- Attractive warm brown tone which weathers to a beautifully uniform shade of silver/grey
- Thermal modification, which enhances stability and durability, ensures a consistent moisture content of less than 8%
- Lengths from 2.4 to 6.1m
- FSC Certified product sourced from sustainable, well managed forests



### SIZE

**DuraWood**<sup>®</sup> is available in lengths of 2.4 to 6.1 (at 30cm intervals) and in width of 150 to 400mm and thicknesses of 26, 40, 52, 65 & 80mm. This variety of sizes allows for greater optimisation and design opportunities with less wastage. Please note that we may not hold all sizes in stock at all times and it may be possible to source alternative sizes.

## **Uses for DuraWood**

## **CLADDING, SIDING & FAÇADES**

**DuraWood®** is suitable for siding and façades and is the ideal choice where aesthetics and less frequent maintenance are critical. The dimensional stability, durability and natural UV resistance, alongside the lower maintenance requirements on coated products, combine to decrease overall life cycle cost on projects. **DuraWood®** and its range of many sizes mean it can be produced in any profile required to obtain your required appearance.

## WINDOW FRAMES, DOORS & GATES

**DuraWood**<sup>®</sup> has low thermal conductivity and is more durable and dimensionally stable than other woods thus improving the performance of windows and doors during changes in climatic conditions. This increased stability minimises expansion of the wood and ensures that doors and windows will always open freely. Its low density makes it the ideal choice for use as external gates resulting in less weight on hinges. It is produced without the use of any chemicals or preservatives, using far less energy than other artificial materials. **DuraWood**<sup>®</sup> wood is naturally attractive with subtle Iroko / Teak colouring and grain. It can be opaque, translucent or transparent coated. **DuraWood**<sup>®</sup> and its lower maintenance requirements increase its cost effectiveness.

## Summary

- Thermally modified hardwood
- Excellent stability and durability
- Attractive virtually knot-free look
- Naturally consistent colour
- Ideal for coating
- No chemicals used
- Sourced from sustainable forests

## **Contact Us For More Information**

MTS - THE WOOD COMPONENT COMPANY Unit 8 Block B, Bullford Business Campus, Kilcoole, Co. Wicklow, Ireland T: +353 1 2812106 | F: +353 1 2812112 | E: info@woodcomponents.ie www.woodcomponents.ie

### **OUTDOOR FURNITURE & EQUIPMENT**

**DuraWood®** is an ideal choice for tables, chairs, tree houses, play sets, planter boxes and animal shelters because it is non-toxic and able to withstand the rigors of different weather conditions.

## **EXTERNAL LOUVRES / BRISE SOLEIL**

In specifying External Louvres, natural beauty, stability and all weather performance are very important. **DuraWood**<sup>®</sup> is the perfect choice for this application. Its dimensional stability and natural durability result in a product that can be machined into any profile. It will stay flat, will not warp, twist or rot during performance. **DuraWood**<sup>®</sup> Louvres can be left natural to weather to a uniform grey appearance or they can be opaque, translucent or transparent coated with lower maintenance requirements than other timbers.

## **INTERNAL JOINERY**

**DuraWood®** is the perfect choice for use as an Internal Joinery timber. It machines beautifully and with its naturally rich and warm tones, similar to Teak / Iroko in appearance it is very easy on the eye. With a full range of sizes available **DuraWood®** can be machined and manufactured into any profile or product used in internal joinery: Skirting, Architrave, Doors, Panelling, Handrail, Mouldings, Ceiling Sheeting and trims.









Wood Made Better

## DuraWood<sup>®</sup>-Natures Technology

Exclusive to MTS, DuraWood® offers customers a clear-grade sustainably sourced Hardwood which provides a beautiful Teak coloured wood with outstanding durability and exceptional stability in service.

DuraWood® is produced using the latest thermal modification technology - applying heat (180 - 260 Degrees C), water vapour and pressure to the timber.

This modification takes a period of 48 to 96 hours to complete (taking into account different thickness).

The process is very environmentally friendly as no chemical substances are used during modification.



3. Once inside the kiln, temperatures steadily increase to around 260°F, effectively dropping the wood's moisture content to nearly zero. It is at these high temperatures that the chemical and structural changes occur in the wood that make it more dimensionally stable, as well as insect and rot resistant.

Once modified, steam is introduced into the kiln in order to recondition the wood by returning its moisture content between 6-7%. The entire process can takes up to 96 hours depending on the thickness of the Hardwood and doesn't allow for any shortcuts. The process is very environmentally friendly as no chemical substances are used during modification.

## **Modifications**

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- The process reduces the equilibrium moisture content (EMC) and gives the wood a warm brown colour throughout, similar to Teak/Iroko.
- When Cellulose is crystallized the Stability and Durability of the wood increases.
- By extracting the resin and extractives the woods capacity to absorb water is reduced preventing swelling, shrinking and splitting during weathering.
- 100% Natural, nothing added but heat and steam. DuraWood® is chemical and toxin free, resulting that the timber is 100% recyclable

Hemicellulose is converted into furfural & carboxylic acid. resultina in high-resilience & a lower pH value.



### Cellulose is crystallized, resulting in high stability & high durability

Extraction of resin & other extractives

Blocks water absorption of wood & prevents bending, swelling & stretching.

## **Benefits - Wood Made Better**



## HOMOGENEOUS

DuraWood<sup>®</sup> is similar in appearance to Iroko / Teak and the colour of the wood goes throughout the solid section with very good colour consistency through boards.

## STABLE

DuraWood<sup>®</sup> has outstanding Stability in service with resulting in no cupping, movement or splitting. This makes it ideal when choosing a performing timber substrate which can be left unfinished or painted. Long straight grained wide boards are not a problem for DuraWood.

## SAFE

**DuraWood<sup>®</sup>** is approx. 30% more fire resistance when compared to non modified wood.

## **INSECT REPELLANT**

**DuraWood**<sup>®</sup> is resistant to mould and is resistant to attack from the three most common woodboring insects found in Europe.

## **100% NATURAL**

DuraWood<sup>®</sup> is free of any chemical substances.

## ECOLOGICAL

**DuraWood<sup>®</sup>** is harmless to humans and animals. It is environmentally friendly, recyclable, strong, long lasting and produced from sustainable forests.

## DURABLE

**DuraWood<sup>®</sup>** is suitable for use in external situations such as Cladding, Louvres, Windows, Doors, Fascia, Soffit and General ioinery.

## **INSULATOR**

**DuraWood®** offers 25% greater sound and insulation benefits when compared to non modified wood.

# Durability

For external cladding purposes **DuraWood®** is an extremely durable timber (class 1-2 according to BS EN 350-2). This durability has been achieved by utilising heat, steam and pressure. This form of treatment is Chemical and toxin free, and results in a timber that is 100% recyclable. With this Durability Classification, **DuraWood®** has a lifespan of 50-60 years when used as an external cladding board that is subject to general outdoor exposure.



**DuraWood®** is approximately 327Kg/m3 at a moisture content of 8% (+/- 2%). This low density allows for ease of handling and allows greater flexibility in relation to installation.



As with all our timber, **DuraWood®** is FSC Certified and is therefore sourced from well-managed, sustainable forests.







**DuraWood®** does not require maintenance and if left untreated, will quickly weather to a beautiful silver/grey. Although there is no requirement for coating in terms of durability, due to the exceptional stability properties described above, this product is highly suitable for factory finishing through our Vacuum Coater or other site applied coatings which we can advise on.

The coatings system will be subjected to less substrate movement and, as a result, the coating will last significantly longer than when applied to non-modified timbers. This in turn substantially reduces the maintenance requirement, meaning that the lifetime cost of the product is reduced.



The thermal modification process changes the structure of the timber, resulting in **DuraWood**® having an extremely low, maintained moisture content of 8% (+/- 2%). The benefit of this is that it enhances the timber's dimensional stability; hereby avoiding cupping and overall movement. Excellent stability, low density and a contemporary look mean that **DuraWood®** can also be used to areat effect internally.

Results show that **DuraWood**<sup>®</sup> has outstanding dimensional stability properties, making it suitable for a wide variety of project types including Windows, Doors, Cladding, Internal and External Joinery.



**DuraWood<sup>®</sup>** is a beautiful brown colour with a subtle figuring. Once modified **DuraWood<sup>®</sup>** creates a consistent look reminiscent of Iroko / Teak. When left unfinished. **DuraWood**<sup>®</sup> weathers more auickly than unmodified timbers, in a uniform and more pronounced way resulting in a beautiful silver/grey appearance.

**DuraWood®** is a smooth, straight-grained and virtually knot-free hardwood which is perfect for any projects that require a clean, sharp and contemporary appearance.

**DuraWood<sup>®</sup>** is frequently preferred by Architects to achieve the high expectations of their design both in appearance and performance.