



OPERATIONS & MAINTENANCE MANUAL

IPÈ SOLID DECKING BOARDS including iDecking System



Botanical Name: *Tabebuia* spp.
Common Names: Lapacho / Cortez / Ironwood

Date **04/02/2022**

PRODUCT DESCRIPTION



It is a very widely used wood in the decking industry and can be used for small, medium or large floors, subjected to low or high levels of foot traffic, in private residential and commercial projects with a variety of different fixing details. It can also be used for cladding.

Ipè ranges in colour from light to dark brown through to olive green, Ipè is a natural wood, subject to slight dimensional changes over time, fading and other aspects such as small surface cracks on the surface and shrinkage.

When exposed to sunlight and normal weather conditions over time, ipè wood undergoes a natural tone and colour alteration. The colour will fade and the boards turn a silvery grey in colour. The most significant colour changes will occur within the first 18 months after exposure to atmosphere and UV light but fading and changes will continue long-term.

Regular cleaning and maintenance with appropriate oils can minimize this process.

Boards curling slightly and small surface cracks are perfectly normal and natural occurrences to ipè and other tropical hardwoods and should not be considered as product defects.

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES <i>Source Cirad</i>	Values	Standard deviation
Specific gravity	1,040 kg/m ³	+/- 90 kg/m ³
Monnin hardness	14.6	+/- 3.1
Volumetric shrinkage coefficient	0.68%	+/- 0.09%
Tangential shrinkage coefficient	6.40%	+/- 0.9%
Radial shrinkage coefficient	5.10%	+/- 0.50%
Tangential shrinkage coeff./Radial shrinkage coeff. ratio	1.3	
Fibre saturation point	20%	
Stability	Moderately stable	

MECHANICAL PROPERTIES <i>Source Cirad</i>	Values	Standard deviation
Crushing strength	95 MPa	+/- 10 MPa
Static bending strength	166 MPa	+/- 28 MPa
Modulus of elasticity	22,760 MPa	+/- 2,244 MPa

NATURAL DURABILITY <i>Source Cirad</i>	
Fungi (according to E.N. standards)	Class 1: very durable
Dry wood borers	Durable
Termites (according to E.N. standards)	Class D: durable
Use class ensured by natural durability	4
Species covering the use class 5	Yes

Source: Cirad - a French Research Centre that responds to international requests in the fields of agricultural and sustainable development. www.cirad.tropix.fr

for installation with iDeck EasyClick with special EasyClick milling, the following for 1 m ² of flooring		Quantity
Ipè Deck Board 25x140 mm (gap 5 mm)		0.95 m ²
EasyClick milling		0.95 m ²
Substructure joist EasyClick Aluminium Joist for IPE - 15 "A" dip 62x25x2070mm (centre distance 40 cm)		3 m
Off-cuts and installation excluded		

for installation upon screed using visible screws, the following for 1 m ² of flooring		Quantity
Ipè Deck Board 19x90 mm (gap 5 mm)		0.95 m ²
Substructure joist 20x60/70 mm exotic wood (centre distance 45 cm)		2.8 m
Screws: AISI 304 Stainless Steel - M 4.5x35 mm Torx Tx 20		50 pcs
Off-cuts and installation excluded		

for installation upon screed with symmetrical milling, the following for 1 m ² of flooring		Quantity
Ipè Deck Board 25x140 mm (gap 5 mm)		0.95 m ²
Symmetrical milling		0.95 m ²
Substructure joist 42x45 mm dual-layer impregnated Larch wood 4 sides (centre distance 30 cm)		3.5 m
Clips: AISI 304 Stainless Steel "4 holes"		25 pcs
Screws: AISI 304 Stainless Steel - M 4.0x30 mm Torx Tx 15		50 pcs
Off-cuts and installation excluded		

for installation upon screed with concealed milling, the following for 1 m ² of flooring		Quantity
Ipè Deck Board 25x90 mm		1.08 m ²
Concealed milling		1.08 m ²
Substructure joist 42x45 mm dual-layer impregnated Larch wood 4 sides (centre distance 30 cm)		3.5 m
Clips: AISI 304 Stainless Steel "4 holes"		35 pcs
Screws: AISI 304 Stainless Steel - M 4.0x30 mm Torx Tx 15		70 pcs
Off-cuts and installation excluded		

Ipè Deck Board 20x140 mm (no millings)	950/1,250/1,550/1,850 mm
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PROCESSING OPTIONS
Pre-Oiling - One coat on all four sides
90° or T&G (Tongue and Groove on head) butting with the application of a protective product (this operation generates scrap material of about 5 cm in length that will be charged to the customer).
Planing on the visible smooth side (only for installation using visible screws)
Milling on the visible side (only for installation using visible screws)

Tolerance: the indicated board sizes are nominal. The actual sizes may vary by up to 5% due to the nature of the wood material.

PRODUCT INSTALLATION

To be used on predominantly flat decks. Suitable for flat roofs, podium decks, balconies, terraces and walkways.

Before installation, it is recommended to store the boards flat. Do not stand them up against a vertical surface as this runs the risk of the boards starting to bend. The best method of storage is on well secured pallets.

Ipè decking boards should preferably be stored in the shade and sheltered from the elements to avoid fading.

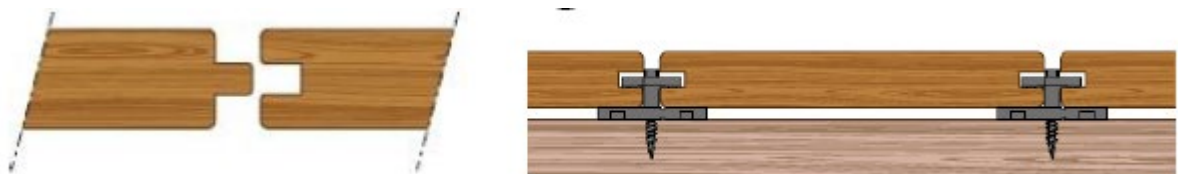
Installation of ipè decking should be carried out using either visible screws passing through the top surface of the boards; via high quality hidden clips fitting to standard or symmetrical milling or via the iDecking comprehensive decking system using special iDecking milling of the boards.

The substructure joists should have a maximum centre distance of:

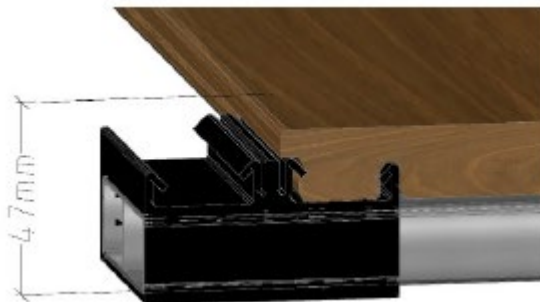
1. Visible top screws maximum 45cm



2. Hidden fixings – maximum 30cm



3. iDecking system - maximum 40cm



Please refer to Wallbarn's EasyClick Installation and EasyChange Installation Guides included as appendices to this document and the iDecking installation videos here <https://www.youtube.com/user/Wallbarn/videos>.

If laying onto support pedestals maximum centres between pedestals is 60cm.

If installing decking onto structural decks, ensure the surface is sufficiently strong to tolerate the weight of the system. Waterproofing membranes to be adequately protected before installation to prevent point loading and / or puncturing of membrane.

Cutting and Drilling

Premium carbide tipped saw blades and high-quality carbide drill bits are recommended to achieve smooth cuts due to the hardness of Ipè. Pre-drill a pilot hole and countersink when using screws as fasteners.

Ipè when cut with suitable blades produces a clean, smooth finish except where the grain is very ropey. It has a blunting effect on the cutting edges so blades and drill bits will wear out quickly and will require regular replacement.

PRODUCT PERFORMANCE

Ipe decking, if well maintained, is extremely long lasting with a lifespan of up to 50 years. It carries a performance warranty with Wallbarn of 15 years. With care and attention, the decking can look and perform for many years beyond the warranty period. Please refer to the Limited Warranty details and conditions later in this manual.

Ipe's density makes it less susceptible to burning. It has a B fire rating making it an ideal choice. It also stays cool even in the hot sun so is ideal for bare feet.

SURFACE CRACKS

This high density means ipe boards can have surface cracking over time. This is perfectly normal and do not affect the durability, longevity, insect or water-resistance properties in any way. See Scope of Guarantee Information later in this datasheet.

SPLITTING

Ipe picks up minimal moisture and, typically, experiences only minor shrinkage or movement after installation. After machining, Ipe is so dense and smooth that it rarely splits or splinters.

CURLING

Ipe is a stable wood with a straight grain but can be subject to curling where, for instance; there is insufficient ventilation under the boards. If the clearance from the sub-surface is too low or if there is insufficient drainage beneath moisture levels can build up and cause curling of the boards.

Also, a large amount of sunlight or heat on the upper surface can cause curling of the boards.

Please see the maintenance section for details on how to address this issue.

MAINTENANCE DETAILS

Regular maintenance with oil is recommended. Since over time and exposure to the elements ipe decking will weather significantly and turn silvery grey, in order to improve its aesthetics of the decking it is strongly recommended that MyDeck Grey Off cleaning solution is used at least once a year to wash the decking surface.

To enhance the wood further and restore elements of the original colour apply MyDeck clear wood oil.

Where more thorough cleaning is needed, the boards can be sanded before using the cleaning solution and oil.

Care and maintenance work should only be carried out in dry weather at temperatures between 10 and 25° C. Do not attempt any cleaning or coating of the wooden deck surface in rain or during damp weather.

GARDEN POTS & PLANTS

Flowerpots can create potential problems with staining when sitting directly on the deck. Minerals from the soil and fertiliser can produce discolouration on the decking. Wallbarn recommends using a plant stand or Wallbarn 7mm PVC pads to elevate the pot and enable air flow underneath.

FURNITURE

Wallbarn strongly recommends using protective pads or coasters under the legs of furniture to prevent scratching the surface of the decking.

All items regularly left on the decking can impact on the weathering that the boards received. Wallbarn recommends that all items of furniture are regularly moved to allow for more evenly distributed weathering.

CLEANING & TO ADDRESS FADING

Washing / sanding with specialist equipment using approved cleaning products and treating with oil as part of a regular care & maintenance plan.

CLEANING & TO ADDRESS FADING

Tools required include the **Timber Decking Washing Machine with 2 Brush Roller**, soft brooms, long handled rollers and rubber brooms / squeegees.



SPECIFICATION

Timber Decking Washing Machine with 2 Brush Roller (black)

Width: 400mm

Power absorption: W 2,300

Roller speed: rpm 1,100

Surface yield m²/h 400

Electrical frequency: Hz 50

Voltage: 220 – 240

Transformer / converter plug is required

Weight: 30 Kg

Dimension: Width 520mm

Length 470mm

Height 380mm

A video of demonstration is here https://www.youtube.com/watch?v=CbMC9R_BY78

STEPS FOR CLEANING

1. Ensure the gaps between boards are free of any foreign material to allow for proper drainage.
2. Spread regular cold water on deck using a hose DO NOT USE A JETWASH / HIGH POWERED HOSE to make the surface wet as this can lead to streak marks on the wood.
3. Apply the Grey Off deck washing solution diluted according to the instructions on the bottle using with a manual spray tank onto the timber deck surface. The Tank holds 3 litres. Alternatively, the Grey Off can be applied using a long handled roller.
4. Wait for approximately 1 hour. There is no issue if the surface starts to dry out.
5. Load the tank of the Washing Machine with either pure water or a small amount of Grey Off diluted into the water.
6. Load clean water into the top tank on the machine (black tank).
7. The yellow handles start the water flushing through the machine. The black handle starts the roller mechanism.
8. Beneath the black tank another grey tank holds the dirty water. This tank needs to be emptied regularly.
9. Install the Black roll onto the Washing Machine.
10. Start to wash the surface of the deck
We do not recommend using the absorption tube on the Washing Machine as a considerable amount of dirty water will build up meaning many numbers of changes to the tank of the Washing Machine will be required.
11. At the end of the washing process the excess dirt and water can be easily removed from the surface with regular water (a number of surfaces washes may be required to remove all surface dirt).
12. If the deck is still grey after washing, allow to dry then sand the surface gently.
13. Allow the surface of the deck to dry fully. We recommend at least 1 coat of MyDeck wood oil is applied to the dried surface. MyDeck wood oil can be applied using a long handled roller.
14. Allow the decking to dry completely before putting any furniture or items back in place.

If applying 2 or more coats of MyDeck wood oil allow 12 – 24 hours between coats and only apply MyDeck wood oil in dry conditions.

For difficult or hard to remove stains, please contact our Technical Department on 0208 916 2222 or info@wallbarn.com for advice.

TO ADDRESS CURLING

1. Purchase hardwood screws and caps to fix down the sections of boards which are lifting.



2. Predrill the ipè timber before attempting to fix the screw.
3. Drill around the screw hole to the circumference and the depth of the wooden cap – see YouTube video <https://www.youtube.com/watch?v=RM8QaHX30VI> .
4. Fix the screw through the hole in the timber board so it connects to the aluminium rail beneath.
5. Apply the cap on to the top of the screw head and tap the cap into the hole - use wood adhesive as an option – see YouTube video <https://www.youtube.com/watch?v=RM8QaHX30VI> .
6. Sand down the top of the cap so that it is flush to the level of the decking board.

HAZARDS IDENTIFICATION

Ipè is an extremely dense wood and difficult to cut. Always use Carbide tipped saws and drills. Cutting can cause dust particles which can irritate eyes and skin.

Ipè contains certain chemicals (lapachol, deoxylapachol and lapachenole) within the wood and a significant content of Silica (Silicon Dioxide or SiO₂), Although severe reactions are quite uncommon, ipè has been reported to cause skin, eye, and respiratory irritation.

Proper protective clothing and equipment should always be used when handling and cutting ipè.

FIRST-AID MEASURES

In the event of cuts and damage from dropped timber, wash out wound with plenty of clean water. Seek medical attention.

In the event of skin, eye, and respiratory irritation seek medical attention as soon as possible.

Sawdust or splinters into the body can cause infection so medical treatment should be sought immediately in the event of ingress into the body.

FIRE-FIGHTING MEASURES

Ipe decking is Class C and does not constitute a fire hazard. Use extinguishing media appropriate to the surrounding fire conditions.

ACCIDENTAL RELEASE MEASURES

Damaged product can be taken up and disposed of to landfill if necessary. However, recycling is the preferred method of disposal. As supplied, the products are not classified as hazardous.

HANDLING AND STORAGE

When handling product, due regard should be paid to the risks outlined in the Manual Handling Operations Regulations 1992, appropriate PPE should be used.

The decking boards will be delivered secured onto pallets. Suitable lifting equipment should be used to move pallets operated by qualified personnel.

The product should be stored in a safe and stable manner. It is recommended to store the boards flat. Do not stand them up against a vertical surface as this runs the risk of the boards starting to bend.

Ipe decking boards should preferably be stored in the shade and sheltered from the elements to avoid fading.

When cutting ipe decking boards always use Carbide saw blades and drill bits. Carbide saw blades will give a clean cut, quickly and safely.

When cutting the product with a saw, appropriate measures to control dust should be used and proper breathing and eye protection should always be worn.

PERSONAL PROTECTIVE EQUIPMENT:

Wear suitable protective clothing e.g. overalls, gloves and safety boots to reduce the chances of physical injury while using this product.

Local Exhaust Ventilation, goggles and a dust mask to the relevant European standard (EN149) is required when cutting.

ECOLOGICAL INFORMATION

Because of ipè wood's very long life span it can be considered to be sustainable to a degree, as carbon sequestration and carbon storage within the boards continues for a long time.

Ipè trees are, however, vulnerable to overharvesting and potentially illegal logging, so Ipè should only be sourced from a reputable and certified supplier.

There is very little waste timber during manufacture due to ipè's strong and stable properties, end of life for ipè is sustainable as the product can be upcycled or recycled for biomass energy.

Transportation is very carbon intensive given the trees grow in South America.

DISPOSAL CONSIDERATIONS

It is strongly recommended that ipè is recycled into another timber use or used in biomass energy production at end of life. Disposal of this product at any approved solid waste disposal site is possible. Disposal of the product should be in accordance with any local or national regulations.

WARRANTIES

A Limited Warranty exists that the products will comply with the test data as laid out in this document for a period of 15 Years. Warranty is limited to replacement of products which have been installed in the correct manner and for the correct purpose only. Warranty is limited to the value of the cost price of the materials only, not replacement costs or any other labour cost.

The lifespan of ipè decking boards is expected to be at least 25 Years.

This Limited Warranty covers solid timber deck boards on condition that the Installation and Care & Maintenance Instructions are followed and our deck boards are installed according to Wallbarn Ltd guidelines and Standard UNI 11538-2.

See Annex B "Wallbarn Decking Installation Manual" using approved application products.

See Terms and Conditions of the Warranty below for other exclusions and limitations of this Warranty.

1) WARRANTY TERMS AND CONDITIONS

- 1.1 Complaints are physically examined by Wallbarn Ltd.
- 1.2 Complaints / claims should be filed in writing to Wallbarn Ltd.
- 1.3 Proof of purchase of the deck boards should accompany the written complaint / claim. Complaints / claims without the appropriate documentation will not be considered.
- 1.4 The company examining complaints (or its representatives) reserves the right to check the deck boards in the place of installation, the manner they have been installed and obtain details of the care and maintenance programme carried out on the decking before giving considering the complaint / claim.
- 1.7 The complaint / claim is only valid if the products are installed in the territory that the original purchase was made.
- 1.8 Wallbarn Ltd warrants that Products "Ipè deck boards" applied in Use Class 4 as defined by EN 335-1 will not be damaged by decay caused by soft-rot fungi and wood destroying fungi and that the Products "Ipè deck boards" will perform in their intended function for a guaranteed lifetime of 25 years.

The above guaranteed lifetime of the Products "Ipè deck boards" exists only where the Products have been installed in the correct and proper manner.

For the avoidance of doubt the natural oxidation process of the wooden deck boards, fading and colour changes including turning silver / grey colour are not covered by this Limited Warranty.

Furthermore, small surface cracks on the Products "Ipè deck boards" are not covered by this Limited Warranty.

2) VISUAL APPEARANCE WARRANTY ON DELIVERY

Each decking board is carefully inspected by our quality control team personnel prior to leaving our factory to ensure they are defect free. We urge Customers and the installers to inspect each board prior to installation. This Limited Warranty does not extend to cover defects in wooden deck boards on delivery after installation has taken place.

See Scope of Guarantee below for other exclusions and limitations of this Warranty overleaf.

3) SCOPE OF THE GUARANTEE

3.1 This guarantee is issued in accordance with and is subject to the laws of England & Wales.

3.2 Obvious defects in the boards should be communicated to the supplier within 30 days from the delivery date of goods on site/warehouse. Claims regarding obvious defects after this period will not be considered.

The chart below (source UNI 11538-1 and Wallbarn Ltd Terms & Conditions of Supply) indicates what shall not be considered as an obvious defect.

CHARACTERISTICS	WOODEN ELEMENTS – BROAD-LEAVED WOODS
Tone and colour variability	Allowed
Sound and adhering knots: Dimensions on the visible side	Defect if diameter is greater or equal to 25% of the length of the board
Sound and adhering knots: Frequency on the visible side	3 per lineal metre ¹
Dead or partially adhering knots	Defect
Sap in the wood	Allowed where boards have been treated with preservative to increase durability
Chamfers ²	Defect
Fissures along sides	Defect
Surface cracks / fissures on the visible side	Allowed if: Depth is less than or equal to 1/3 of board thickness Width is less than or equal to 0.5mm Length is less than or equal to 100mm
Cracking along the sides	Defect
Deep or traversing edge fissures	Defect
Non traversing edge fissures on the heads of the boards	Allowed if length is less than or equal to 20mm
Wood core and fake heartwood	Defect
Fractures and mechanical damage	Allowed on the non-visible side if the depth is less than or equal to 2mm
Biological alteration	Defect, with the exception of bluing and black spots caused by insects (pinholes)
Bark inclusions	Not allowed

1 Sound knots with a diameter less than or equal to 10 mm are not taken into consideration

2 As defined in the Standard EN 13756. Mechanical finishing on the individual boards is not considered to be chamfers.

TRANSPORT INFORMATION

Classification for conveyance: - None required.

Best method of transportation is strapped securely onto pallets.

KEY CONTACTS

Wallbarn Ltd.

Unit 16 Capital Business Centre, 22 Carlton Road, South Croydon CR2 0BS

Tel: +44 (0)208 916 2222 Fax: +44 (0)208 916 2223

Email: sales@wallbarn.com

Web: www.wallbarn.com

APPENDIX A:

The following table summarizes the documents and URLs referenced in this document:

Document Name	Location
Decking website URL	https://www.wallbarn.com/decking-2/ourrange/
Wallbarn Ltd Terms & Conditions	https://www.wallbarn.com/terms-conditions-of-supply/

APPENDIX B:

The following documents offer guidance for installation using the iDecking comprehensive decking systems:

- c Wallbarn Decking Installation Manual
- c iDecking EASYCLICK Installation Guide 2018
- c iDecking EASYCHANGE Installation Guide REV3 2020
- b iDecking Installation Guide 2021
- a Wallbarn Pedestal Overview Brochure A4 2022
- Wallbarn Limited Warranty