



# Technical information

July 2023 Version 1





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## Competition product summary

	Added density	Improved stability	Improved durability	Insect resistance	Managed colour	Reduced cracking	Improved strength	Improved machinability	Increased hardness	Improved screw fixing	No fillet marks	Comfort direct sunlight
<b>Sicaro – Exterior timber</b>	●	●	●	●	●	●	●	●	●	●	●	●
<b>Paalu – Interior timber</b>	●	●	●	●	●		●	●	●	●		
<b>Vasa Marine – Boat decking</b>	●	●	●	●	●	●	●	●	●	●	●	●
<b>Accoya</b>	●	●	●			●		●				
<b>Kebony</b>	●	●	●	●	●			●		●		
<b>Thermowood</b>	●	●	●									
<b>Wood Plastic Composite</b>	●	●	●	●	●	●	●	●	●	●	●	



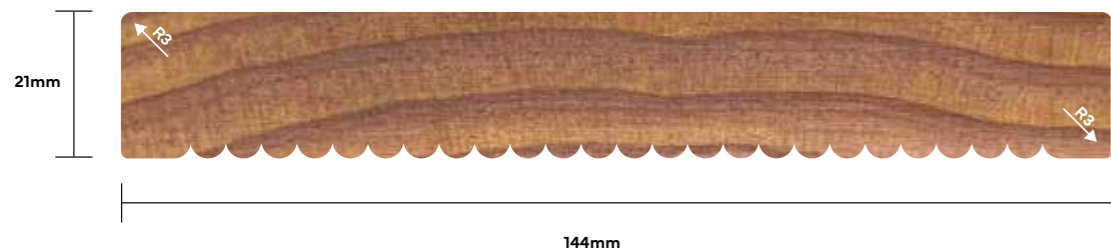
## Mechanical properties of Sicaro and Paalu

	Density	Janka Hardness	Strength MOE	Tangential Movement	Radial Movement
Sicaro	690 kgs/m <sup>3</sup>	6.6kN	101.0 Mpa	2.41%	1.12%
Paalu	650 kgs/m <sup>3</sup>	6.1kN	98.1 Mpa	2.98%	1.96%
European Oak	675 kgs/m <sup>3</sup>	6.0kN	99.2 Mpa	7.80%	4.00%
American Walnut	615 kgs/m <sup>3</sup>	4.5kN	100.0 Mpa	7.80%	5.50%
Bermese Teak	607 kgs/m <sup>3</sup>	5.1kN	97.1 Mpa	2.60%	5.30%
American Walnut	580 kgs/m <sup>3</sup>	4.2kN	84.8 Mpa	7.10%	3.70%



## Sicaro Wildwood Decking

Sicaro Wildwood is a flatsawn product and this will have a lot of variation in the grain pattern.



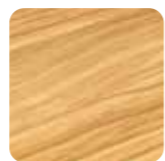
Density: 690 kgs per cubic metre

Hardness: 6.6kN Janka scale

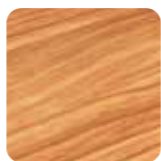
Durability: Very Durable, Class 1 outdoors above ground to CEN/TS 15083-1

Use class: Class 3 outdoors above ground

Emissions: Super E0 when tested to EN ISO 12460-5:2015



**Cerdin**  
light bright maple



**Ticari**  
warm golden teak



**Estera**  
earthy red cedar



**Livada**  
rich brown rosewood



**Azarac**  
dark strong ebony





## Sicaro Safariwood Decking

Sicaro Safariwood is a quartersawn product surfaced to show the deep natural grain.



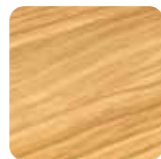
Density: 690 kgs per cubic metre

Hardness: 6.6kN Janka scale

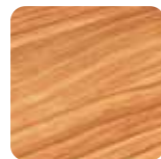
Durability: Very Durable, Class 1 outdoors above ground to CEN/TS 15083-1

Use class: Class 3 outdoors above ground

Emissions: Super E0 when tested to EN ISO 12460-5:2015



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## Sicaro Vivid Decking

Sicaro Vivid is a quartersawn product surfaced to show the deep natural grain.



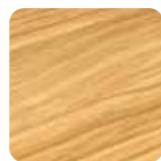
Density: 690 kgs per cubic metre

Hardness: 6.6kN Janka scale

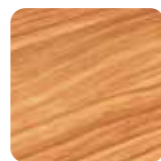
Durability: Very Durable, Class 1 outdoors above ground to CEN/TS 15083-1

Use class: Class 3 outdoors above ground

Emissions: Super E0 when tested to EN ISO 12460-5:2015



**Cerdin**  
light bright maple



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**Estera**  
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**Livada**  
rich brown rosewood



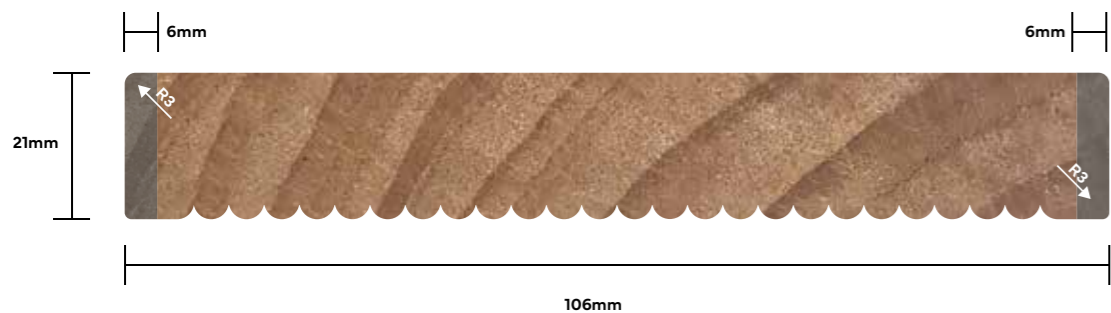
**Azarac**  
dark strong ebony





## Sicaro Riviera Decking

Sicaro Riviera is a quartersawn product with contrasting coloured edges to mimic yacht decks.



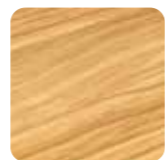
Density: 690 kgs per cubic metre

Hardness: 6.6kN Janka scale

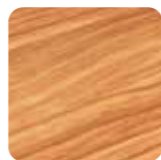
Durability: Very Durable, Class 1 outdoors above ground to CEN/TS 15083-1

Use class: Class 3 outdoors above ground

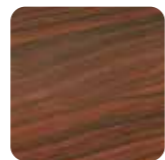
Emissions: Super E0 when tested to EN ISO 12460-5:2015



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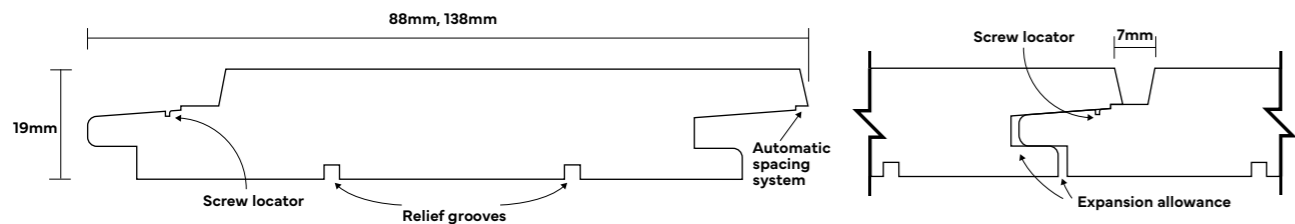






## Sicaro Wildwood Shadow Gap Cladding

Sicaro Wildwood is a flatsawn product and this will have a lot of variation in the grain pattern.



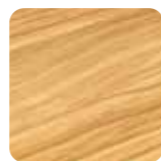
Density: 690 kgs per cubic metre

Hardness: 6.6kN Janka scale

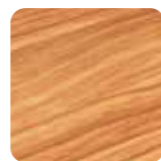
Durability: Very Durable, Class 1 outdoors above ground to CEN/TS 15083-1

Use class: Class 3 outdoors above ground

Emissions: Super E0 when tested to EN ISO 12460-5:2015



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rich brown rosewood



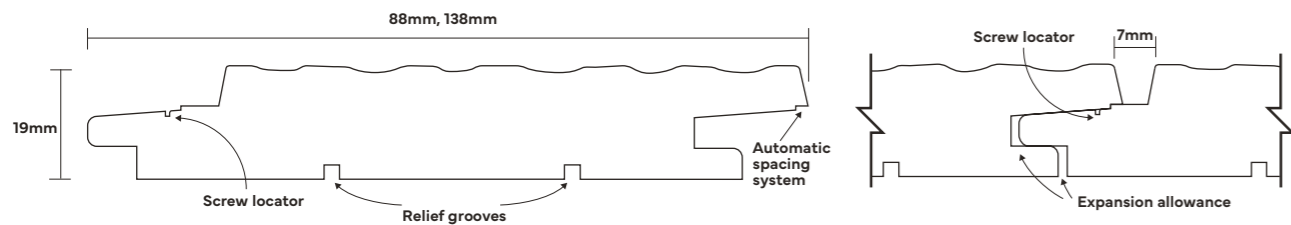
**Azarac**  
dark strong ebony





## Sicaro Vivid Shadow Gap Cladding

Sicaro Vivid is a quartersawn product surfaced to show the deep natural grain.



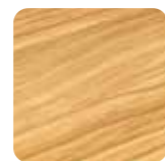
Density: 690 kgs per cubic metre

Hardness: 6.6kN Janka scale

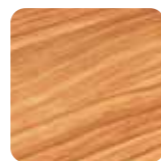
Durability: Very Durable, Class 1 outdoors above ground to CEN/TS 15083-1

Use class: Class 3 outdoors above ground

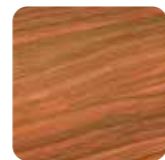
Emissions: Super E0 when tested to EN ISO 12460-5:2015



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**Livada**  
rich brown rosewood

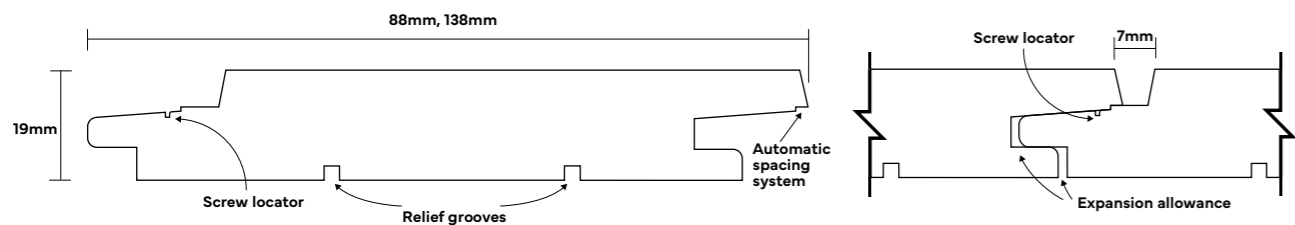


**Azarac**  
dark strong ebony



## Sicaro Safariwood Shadow Gap Cladding

Sicaro Safariwood is a quartersawn product and will have a straight grain appearance.



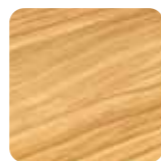
Density: 690 kgs per cubic metre

Hardness: 6.6kN Janka scale

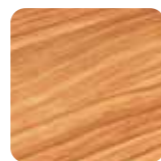
Durability: Very Durable, Class 1 outdoors above ground to CEN/TS 15083-1

Use class: Class 3 outdoors above ground

Emissions: Super E0 when tested to EN ISO 12460-5:2015



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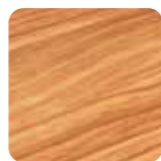
## Paalu panel

Construction: Full lengths stave

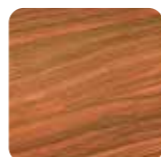
Density: 650 kgs per cubic metre

Hardness: 6.1kN Janka scale

Emissions: Super E0 when tested to EN ISO 12460-5:2015



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warm golden teak



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## Summary of testing and certification

	Standard	Test Region	Result
Paalu Emissions	EN ISO 12460-5:2015 (NB: Results are equivalent to Super E0)	Europe	0.46 mg/100g
Sicaro Emissions	EN ISO 12460-5:2015 (NB: Results are equivalent to Super E0)	Europe	0.44 mg/100g
	CARB phase 1 and CARB phase 2	Global	Complies
	IOS- MAT - 0003: Formaldehyde requirements of wood-based materials and products	Global	Complies
Stability and movement	FIRA Standard 48 Environmental response test, 35%rh, 25°C	UK	Complies
	FIRA Standard 48 Environmental response test, 65%rh, 20°C	UK	Complies
Tangential movement	2.58%	Global	Low movement*
Radial movement	1.86%	Global	Low movement*
Formulation	IOS - MAT- 0010: Chemical compounds and substances	Global	Complies
	IOS - PRG - 0021: Products in contact with foodstuffs	Global	Complies
	IOS-MAT- 0066: Surface coatings and coverings - general requirements	Global	Complies
	IOS-MAT- 0069: Adhesives for wood-based materials	Global	Complies
Lamination	IFT Rosenheim	Europe	PASS**
Coating performance	Resistance to UV fade	Europe	Excellent**
Sicaro Durability	Class 1 (the most durable) tested to EN113	Global	Class 1 Durable

	Standard	Test Region	Result
Warranty	75 years against rot and decay when used outdoors above ground	Global	Biotanex ****
Sicaro Wildwood slip resistance	British standard 7976-2 + A1:2013	UK	Low Slip potential
Sicaro Safariwood slip resistance	British standard 7976-2 + A1:2013	UK	Low Slip potential
Sicaro Wildwood slip resistance	CEN/TS 16165:2016	European Union	Low Slip potential
Sicaro Safariwood slip resistance	CEN/TS 16165:2016	European Union	Low Slip potential
Sicaro Wildwood slip resistance	AS 4586 - 2013	Australia	D1
Sicaro Safariwood slip resistance	AS 4586 - 2013	Australia	P4
Sicaro Wildwood slip resistance	SS 485:2011	Singapore	X
Sicaro Safariwood slip resistance	SS 485:2011	Singapore	X
Sicaro Wildwood slip resistance	AS/NZ 4586.2004	New Zealand	X
Sicaro Safariwood slip resistance	AS/NZ 4586.2004	New Zealand	W
Termite resistance	Resistance to termite attack	Thailand	Good**

\* In-house testing

\*\* As per comparable product in the market

\*\*\* Report available upon request

\*\*\*\* Subject to conditions, available upon request

## Colours

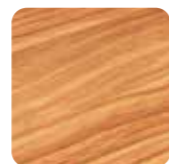
### Colour Maturation

Biotanex product is harder, stronger, resists black mould without the timber fortification process locking performance and colour all the way through to the core of all Sicaro product and without a protective coating Sicaro products will mature to a grey patina over time.

These images show Sicaro Ticari once installed, the same product 2 years later and then washed 3 years after installation without any protective treatment being applied. Please note that after cleaning unprotected product colour will be revealed although the tone will have changed compared to newly installed product. This colour change is determined by environmental factors and will therefore differ from region to region and application to application with exposure to the elements over the product service life.



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light bright maple



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dark strong ebony

### Caring for your Sicaro products

If your Sicaro products have been left to silver they can be washed or lightly sanded to reveal colour that can be enhanced and protected using a good quality oil. It is recommended that only penetrating products are used especially on decking to prevent a surface film that could reduce the products grip resistance when wet.

Where an oil has been applied during installation then re-coating will be required in accordance with the coating supplier's instructions.

However it is important to remember that:

- the quality of surface preparation and the condition of the old coating will determine how good the recoating looks and how well it will last
- take time preparing the surface before re-coating
- better quality coatings will last longer and look better, so spend the money to buy the best coating product you can afford
- apply the number of coats recommended by the coating supplier.



Ticari newly installed

Ticari aged after 2 years installation

Ticari washed after 3 years installation

# All Sicaro and Paalu products are made from sustainable FSC® certified timber

The timber is fortified using proprietary water-based formulations impregnated all the way through the timber and when cured provides locked in weight, strength, hardness, colour and durability without the use of any biocides.



Preferred by Nature™



NEPCon OÜ hereby confirms that the Chain of Custody system of **Biotanex New Zealand Limited**  
 2670 Omaha Road, Rd 5  
 Hastings, 4175  
 New Zealand

has been assessed and certified as meeting the requirements of  
 FSC-STD-40-004 V3-0; FSC-STD-50-001 V2-0

The certificate is valid from 15-01-2020 to 14-01-2025  
 Certificate version date: 15-01-2020

Scope of certificate  
 Certificate type: Single Chain of Custody

Certificate registration code  
 NC-COC-056941

FSC License Code  
 FSC-C152134

  
 Laura Terrill Kohler  
 Director, NEPCon Assurance  
 Filsoofi 31, Tartu  
 Estonia

Specific information regarding products and sites is listed in the appendix(es) of this certificate. The validity and exact scope covered by this certificate shall always be verified at [www.info.fsc.org](http://www.info.fsc.org).

FSC® A000535 | The mark of responsible forestry | [www.ic.fsc.org](http://www.ic.fsc.org)

This certificate itself does not constitute evidence that particular product supplied by the certificate holder is FSC® certified (or FSC Controlled Wood). Products offered, shipped or sold by the certificate holder can only be considered covered by the scope of this certificate when the required FSC claim is clearly stated on invoices and shipping documents. The physical printed certificate remains the property of NEPCon OÜ and shall be returned upon request.



# Sicaro MSDS Sheet



## CONTACT

Details of supplier: Biotanex New Zealand Limited  
2670 Omaha Road  
Hastings 4175  
New Zealand

Contact: admin@biotanex.com

Telephone: +64 (0)21 268 5166

## COMPOSITION / INFORMATION ON INGREDIENTS

There are no components present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or substances of equivalent concern, or have been assigned a workplace exposure limit.

## PHYSICAL DESCRIPTION

Sicaro™ is manufactured as timber boards or remanufactured products ranging in thickness from 15mm to 50mm, made from *Pinus radiata* wood impregnated with a phenolic material and textile dyes to create a range of colours.

## HEALTH HAZARD INFORMATION

This product, in its natural form, is not classified as hazardous. However, handling board edges and surfaces may cause splinters. The known health effects of the constituents of the boards are as follows:

- When the boards are machined (sawn, sanded, drilled, routed, planed, etc) wood dust is produced.
- Wood dust and splinters may cause irritation of the nose and throat, eyes and skin.
- Wood dust may also be a sensitiser, and some people may develop allergic dermatitis or asthma.
- Inhalation of wood dust may increase the risk of nasal and para-nasal sinus cancers.

Exposure to the wood dust produced from machining Sicaro™ may result in the following health effects:

**Ingestion:** Swallowing is unlikely to occur in a single ingestion large enough to cause any ill effect. Treated timber must NOT be used for cooking fires, barbecues or spit roasts.

**Eye:** Wood dust may be irritating to the eyes, causing discomfort and redness.

**Skin:** The wood dust may irritate the skin, resulting in itching and occasionally a red rash. Allergic contact dermatitis may occur.

**Inhaled:** The wood dust may irritate the throat and lungs especially in people with upper respiratory tract or chest complaints. Asthma may occur.

**Chronic:** Repeated exposures to uncontrolled wood dust from these boards over many years may increase the risk of allergies, dermatitis, asthma or chronic nose or throat irritation in some people.

## FIRST AID

**Swallowed:** Drink a glass of water. Seek medical attention if there is abdominal discomfort.

**Eye:** Remove contact lenses, flush with flowing water for at least 15 minutes, and if symptoms persist seek immediate medical attention.

**Skin:** Wash with mild soap and running water.

**Inhaled:** Remove to fresh air if recovery is not rapid seek medical assistance.

**Advice to Doctor:** Treat symptomatically.

## PRECAUTIONS FOR USE

**Exposure Standards:** There are no specific standards for treated softwood in the Exposure Standards. In the interests of maintaining a safe working environment, it is recommended that workplace exposures to wood dust should not exceed 1.0 mg/m<sup>3</sup> TWA.

**Engineering Controls:** All work with these treated boards should be carried out in such a way as to minimise the generation of wood dust. Under factory conditions, machining should be done with equipment fitted with exhaust devices capable of removing wood dust at the source. Hand power tools should be fitted with dust bags. Work areas should be well ventilated. They should be cleaned at least daily, and wood dust should be removed by vacuum cleaning or by wet sweeping.

**Skin Protection:** Wear loose, comfortable clothing. Long sleeved shirts, trousers and comfortable work gloves to appropriate European Standards should be worn if skin irritation occurs, and to minimize the risk of splinters. After handling boards, wash hands with mild soap and water. Do not scratch or rub the skin if it becomes irritated. Wash work clothes regularly and if possible separate from other clothes.

**Respiratory Protection:** If wood dust exposures are not controlled when machining (sawing, routing, planing, drilling, sanding, etc.) a class R1 or R2 replaceable filter or disposable face piece respirator to appropriate European Standards should be worn.

**Eye Protection:** Safety glasses or non-fogging goggles to appropriate European Standards should be worn when machining.

**Combustibility:** These boards are combustible but difficult to ignite. Treated wood is less combustible than untreated wood. Avoid a build-up of wood dust and keep all storage work areas well ventilated. Avoid sources of radiant heat and flame and avoid sparks and sources of ignition in all electrical equipment, including dust extraction equipment. People must not smoke in storage or work areas.

## SAFE HANDLING INFORMATION

**Storage and Transport:** Boards should be stored in well-ventilated areas away from sources of heat, flames or sparks. No special transport requirements are considered necessary.

**Waste Disposal:** Off-cuts and general waste material should be placed in containers and disposed of at approved landfill sites, or disposed of in an approved furnace or incinerator, in accordance with disposal authority guidelines. Wood dust should be cleaned up by vacuuming or wet sweeping.

**Fire Hazard:** Burning or smouldering boards or wood dust can generate irritating and toxic fumes and gases including carbon monoxide, carbon dioxide, aldehydes, and organic acids. Dry wood dust in high concentrations can be explosive. Use water or dry chemical fire extinguishers. Fire fighters should wear self-containing breathing apparatus.

**Smoking:** Storage and work areas should be smoke free.

## NOTE TO READER

The information provided herein was believed by Biotanex Global Limited (Biotanex) to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. All products supplied by Biotanex are subject to Biotanex terms and conditions of sale. BIOTANEX MAKES NO WARRANTY, EXPRESSED OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY BIOTANEX, except that the product shall conform to Biotanex's specifications. Nothing contained herein constitutes an offer for the sale of any product. ® and ™ are trademarks of Biotanex.

This MSDS consists of 3 pages in total.



# Paalu MSDS Sheet



## CONTACT

Details of supplier:	Biotanex New Zealand Limited 2670 Omaha Road Hastings 4175 New Zealand
Contact:	admin@biotanex.com
Telephone:	+64 (0)21 268 5166

## COMPOSITION / INFORMATION ON INGREDIENTS

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or substances of equivalent concern, or have been assigned a workplace exposure limit.

## PHYSICAL DESCRIPTION

Paalu™ is manufactured as timber boards or remanufactured products ranging in thickness from 15mm to 50mm, made from *Pinus radiata* wood impregnated with a water based aminoplast and textile dyes to create a range of colours.

## HEALTH HAZARD INFORMATION

This product, in its natural form, is not classified as hazardous. However, handling board edges and surfaces may cause splinters. The known health effects of the constituents of the boards are as follows:

- When the boards are machined (sawn, sanded, drilled, routed, planed, etc) wood dust is produced.
- Wood dust and splinters may cause irritation of the nose and throat, eyes and skin.
- Wood dust may also be a sensitiser, and some people may develop allergic dermatitis or asthma.
- Inhalation of wood dust may increase the risk of nasal and para-nasal sinus cancers.

Exposure to the wood dust produced from machining Paalu™ may result in the following health effects:

**Ingestion:** Swallowing is unlikely to occur in a single ingestion large enough to cause any ill effect. Treated timber must NOT be used for cooking fires, barbecues or spit roasts.

**Eye:** Wood dust may be irritating to the eyes, causing discomfort and redness.

**Skin:** The wood dust may irritate the skin, resulting in itching and occasionally a red rash. Allergic contact dermatitis may occur.

**Inhaled:** The wood dust may irritate the throat and lungs especially in people with upper respiratory tract or chest complaints. Asthma may occur.

**Chronic:** Repeated exposures to uncontrolled wood dust from these boards over many years may increase the risk of allergies, dermatitis, asthma or chronic nose or throat irritation in some people.

## FIRST AID

**Swallowed:** Drink a glass of water Seek medical attention if there is abdominal discomfort.

**Eye:** Remove contact lenses, flush with flowing water for at least 15 minutes, and if symptoms persist seek immediate medical attention.

**Skin:** Wash with mild soap and running water.

**Inhaled:** Remove to fresh air if recovery is not rapid seek medical assistance.

**Advice to Doctor:** Treat symptomatically.

## PRECAUTIONS FOR USE

**Exposure Standards:** There are no specific standards for treated softwood in the Exposure Standards, In the interests of maintaining a safe working environment, it is recommended that workplace exposures to wood dust should not exceed 1.0 mg/m<sup>3</sup> TWA.

**Engineering Controls:** All work with these treated boards should be carried out in such a way as to minimise the generation of wood dust. Under factory conditions, machining should be done with equipment fitted with exhaust devices capable of removing wood dust at the source. Hand power tools should be fitted with dust bags. Work areas should be well ventilated. They should be cleaned at least daily, and wood dust should be removed by vacuum cleaning or by wet sweeping.

**Skin Protection:** Wear loose, comfortable clothing. Long sleeved shirts, trousers and comfortable work gloves to appropriate European Standards should be worn if skin irritation occurs, and to minimize the risk of splinters. After handling boards, wash hands with mild soap and water. Do not scratch or rub the skin if it becomes irritated. Wash work clothes regularly and if possible separate from other clothes.

**Respiratory Protection:** If wood dust exposures are not controlled when machining (sawing, routing, planing, drilling, sanding, etc.) a class R1 or R2 replaceable filter or disposable face piece respirator to appropriate European Standards should be worn.

**Eye Protection:** Safety glasses or non-fogging goggles to appropriate European Standards should be worn when machining.

**Combustibility:** These boards are combustible but difficult to ignite. Treated wood is less combustible than untreated wood. Avoid a build-up of wood dust and keep all storage work areas well ventilated. Avoid sources of radiant heat and flame, and avoid sparks and sources of ignition in all electrical equipment, including dust extraction equipment. People must not smoke in storage or work areas.

## SAFE HANDLING INFORMATION

**Storage and Transport:** Boards should be stored in well-ventilated areas away from sources of heat, flames or sparks. No special transport requirements are considered necessary.

**Waste Disposal:** Off-cuts and general waste material should be placed in containers and disposed of at approved landfill sites, or disposed of in an approved furnace or incinerator, in accordance with disposal authority guidelines. Wood dust should be cleaned up by vacuuming or wet sweeping.

**Fire Hazard:** Burning or smouldering boards or wood dust can generate irritating and toxic fumes and gases including carbon monoxide, carbon dioxide, aldehydes, and organic acids. Dry wood dust in high concentrations can be explosive. Use water or dry chemical fire extinguishers. Fire fighters should wear self-containing breathing apparatus.

**Smoking:** Storage and work areas should be smoke free.

## NOTE TO READER

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