



# Laminex™ Woodgrain

## Laminex™ Woodgrain Technical Data Sheet

Laminex™ Woodgrain Collection is a non PVC olefin decorative film bonded to an MDF MRE0 substrate to provide a double faced pre-finished decorative panel. It is not a melamine, (like Melteca®). It has a softer surface similar to that of a timber veneer and as such requires extra care when handling and machining to avoid damage.

Ensure all tools used are kept sharp and well maintained.

When cleaning panels particularly after edge banding always wipe with the grain direction not across the grain for best results. Refer to the Edge Finishing section on page 6, for further edging instructions.

Laminex™ Woodgrain Collection is available in 6 decors with matching ABS and Laser edgetape.

### Composition

Laminex™ Woodgrain panels are manufactured on a durable MRE0 (Moisture Resistant Zero Emission) Medium Density Fibreboard substrate providing an ideal substrate for the decorative film.

The decorative surface is comprised of Olefin film that features innovative surface technologies delivering a 3D embossed surface texture creating a tactile surface in a range of effects.

### Uses

- Vertical Interior use
- Kitchen, bathroom and laundry cabinets
- Furniture commercial and residential
- Wall linings in dry areas

### Specifying

When specifying Laminex™ Woodgrain include the following information:

### Product Characteristics

Décor	Bisque, Flaxen, Shade, Sorrel, Terrain, Umber
Finish	Laminex™ Woodgrain F2S
Sheet size	2800x1220
Thickness	18mm & 25mm (nominal)
Substrate	Lakepine E0 MR
Matching Edgetape	22 x 1mm & 31 x 1mm ABS 22 x 1.2mm & 31 x 1.2mm Laser

### Design Considerations

The edges of Laminex™ Woodgrain should be finished with ABS or laser edgetape.

Any exposed substrate must be sealed before service.

Laminex™ Woodgrain is no different from any other material in that darker colours will always show scratches and superficial wear and tear more readily than lighter colours.

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## Substrate Properties

Lakepine® MDF MR Substrate properties	Unit	18mm	25mm
Moisture Content	%	7	7
Density	kg/m <sup>3</sup>	730	730
Internal Bond	MPa	1.1	0.95
Modulus Of Rapture (MOR)	MPa	50	50
Modulus Of Elasticity (MOE)	MPa	3700	3500
Surface Soundness	MPa	0.9	0.9
Face Screw Holding	N	1600	1500
Edge Screw Holding	N	670	700
Thickness Swell 24 Hr	%	7	6
Formaldehyde Emission	mg/L	≤0.5	≤0.5
Internal Bond After Wet Cyclic Test	MPa	0.2	0.15
Thickness Swell After Wet Cyclic Test	%	9	6
Wet Bending Strength	MPa	5	4

## Performance Data

Properties	Test method	Test results
Resistance to wear	ISO 4586-2:2018 Clause 11	Minimum Initial point = 575 revolutions Mean = 900 revolutions
Resistance to scratching	ISO 4586-2:2018 Clause 29	Rating 3
Resistance to staining	AS/NZS 4266.2:2017 Section 8	No visible marks
Resistance to steam	AS/NZS 4266.2:2017 Section 6	No effect
Lightfastness	ISO 4586-2:2018 Clause 32	Grey scale 5

# Laminex™ Woodgrain

## Limitations

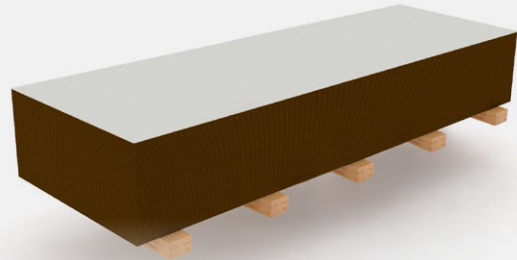
- Laminex™ Woodgrain is not intended for use in an exterior situation.
- Do not use Laminex™ Woodgrain in constant wear situations such as sink benchtops, high use shop counters, bar tops or restaurant tables.
- Laminex™ Woodgrain must not be used in high humidity or wet areas such as saunas or showers.
- The Laminex™ Woodgrain substrate must not come in contact with any liquid. Failure to keep dry will affect the performance of the panel.
- Health and Safety Precautions (Refer Health and Safety section of the document).

## Storage and handling

- Laminex™ Woodgrain is a high quality product and must be handled accordingly.
- Care of the panel is essential to protect the surface.
- To avoid damage to the sheets, lift rather than drag or slide panels over each other or across sharp or gritty surfaces.
- On decors with protective film leave intact until installed and ready for use.
- Laminex™ Woodgrain must be stored away from moisture, heat and sunlight.

- Sheets must be flat stacked on aligned bearers or gluts.
- Bearers or gluts must be of uniform thickness and must extend across the full width of the stack. See Fig 1.
- 2800 long sheets require 5 bearers for adequate support.
- Overhang sheets equal distance at each end.

Fig 1.



## Durability

When stored, handled, used and maintained in accordance with this document, Laminex™ Woodgrain will meet the durability requirements of NZBC B2.3.1(c) for 5 years. Laminex New Zealand™ have established a 7 year warranty for Laminex™ Woodgrain.

Laminex New Zealand™ will not be liable to any person for any product failure if the conditions as to storage, handling, use and maintenance of Laminex™ Woodgrain as outlined within this document are not complied with.

Dimensions		
Thickness (mm)	18mm	25mm
Weight (kgs/m2)	13.50	18.61
Sheet tolerances (mm)		
Length and width	+/- 2.00	+/- 2.00
Thickness	+0.35 -0	+0.35 -0
Squareness (maximum difference between diagonals)	≤ 2mm per metre	≤ 2mm per metre
Straightness (maximum deviation in plane along the edge)	1.50 per metre	1.50 per metre

# Laminex™ Woodgrain

## Working Recommendation

### Machining

To obtain the best results when machining Laminex™ Woodgrain, avoid excessive speed rates.

Guidelines for Cutting Laminex™ Woodgrain				
Saw diameter (mm)	250	300	350	400
Saw RPM	4600	3800	3300	2900
# of teeth	80	96	108	120
Rim speed (m/sec)	47	56	66	75
Max feed rate (m/min)	43	52	58	65

As these are examples taken from various tooling manufacturers, please consult with your tooling supplier to ensure safe operating speeds are used.

A saw fitted with a scribing saw or hollow ground saw blade will produce the best result directly from the sawing equipment. This will eliminate further work prior to edge finishing.

However, sophisticated machinery is not always necessary to achieve quality edge finishes. A sharp bench saw buzzer or router combination or for the home handyperson, a fine tooth panel saw, hand-planer combination can be used to give excellent results.

In both applications, panels should be cut slightly oversize and then edges planed to final dimensions. To avoid excessive breakout when hand-sawing, keep saw on a low angle to the sheet, provide adequate support to the sheets and do not force saw-blades through the cut.

### Gluing

The surface of Laminex™ Woodgrain is made to withstand resistance to adhesion, however, this can cause problems with some glues. For gluing of Laminex™ Woodgrain to Laminex™ Woodgrain surfaces, abrading of the surface is required and the use of a Melamine adhesive such as Woodlock 3100 is recommended.

For using as a wall lining, framing must be dry and a suitable wall board adhesive such as Maxbond should be used after first sanding the surface to provide a key for adhesive. Expansion joints should also be allowed for.

Pilot Hole Diameters for Lakepine MDF								
Screw gauge	3	4	5	6	7	8	9	10
Pilot hole diameter in mm	1	2	2.4	2.6	2.7	3.0	3.3	3.5

### Fastening

#### Selected screws

Always use screws specifically designed for use with medium density fibre board or particle board e.g. Twinfast-screws or Super-screws. Drill a pilot hole slightly beyond the full depth of the screw penetration. Do not over-tighten screws.

A drop of adhesive applied to the screw thread will increase holding power.

#### Face screwing

To avoid surface lifting, screws must not penetrate more than two thirds of panel thickness, e.g. 16mm panel = 10.5mm maximum penetration.

# Laminex™ Woodgrain

## Guidelines for CNC machining of Laminex™ Woodgrain Panels

Panel Cutting		
Cutter type	12mm Spiral cutter	4mm Spiral cutter
Cutter speed RPM	18000 rpm	18000 rpm
Max feed rate (m/min)	2.0 m/min	1.0 m/min

Recommended cutters are Vortex 1200 two flute upcut finishing spiral type or equal.

Panel boring			
Cutter type	20mm Forstner bit	8mm Brad point	5mm Brad point
Cutter speed RPM	4000 rpm	4000 rpm	4000rpm
Max feed rate (m/min)	1.3 m/min	1.0 m/min	1.5 m/min
Recommended max feed rate	47	56	66

### Chip load information

The chip load is a measurement of the thickness of material removed by each cutting edge during a cut. This is a valuable piece of information which can then be used to calculate new setups.

Calculations are as follows: chip load = Feed Rate (millimetres per minute) / (RPM x 2 Flutes) Chip Load = 0.4233

Chip loads are based on material thickness of average size for the cutting edge length of the tool. These recommendations do not apply to thicker materials or tools with long cutting edge lengths. These chip loads are only a recommended starting point and may not accommodate all circumstances.

We would strongly encourage you to consult your tool supplier directly on new tool applications.

### Cutter setup and cutting tips

Care should be taken to ensure that the scriber tips of the cutter are set below the lower face of the panel to avoid chipping of the lower face veneer.

For fine finishing an onion skin cut\* finish is recommended and for small pieces such as small drawer backs and cabinet rails, these should be tabbed to adjacent parts to hold these in place during the cutting process. Tabs need be only thick enough and long enough to hold 0.3mm, 15-20mm long. Once the cutting is completed the tabs may be snapped off and if necessary, a light sanding to remove.

\*Onion skin cutting can be achieved by cutting the panels approximately 0.5mm over size on all sides and by leaving approximately 0.3mm of the lower face veneer in tact. A second cut of the panel is then made to trim the panel to the final dimensions with the cutter penetrating beyond the lower face thus ensuring a clean and non chipping panel.

# Laminex™ Woodgrain

## Edge Finishing

It is recommended that all edges of panels be edge finished.

Edgetape for the Laminex™ Woodgrain Collection is available in 22x1mm & 31x1mm ABS and 22x1.2mm & 31x1.2mm laser.

Edgetape for Laminex™ Woodgrain must be applied with an edge banding machine as cold pressing with contact adhesive is unsatisfactory.

- Laser edging is supplied with a functional layer designed for processing with CO2 and diode laser, hot air, plasma or NIR process.
- ABS edgetape comes primed for hotmelt glue application.
- Apply at feed rates and temperatures as per the mechanical edge bander and adhesive suppliers recommendations.
- **Glue flow should be adjusted to limit any excess on the face of the panel.**
- **Flat scrappers should be adjusted as is necessary when processing any textured panels or alternatively turned off.**
- **It is recommended to turn off buffers as any excess glue can be reactivated and has the potential to spread and be trapped in the finely textured finish.**
- **It is best practice to run a trial prior to production processing.**

## Care And Cleaning

Regular cleaning requires only a wipe down with warm soapy water, follow up with dry cloth. Avoid the use of acetone or trichloroethylene for cleaning purposes.

Always apply any cleaning product to a soft cloth, never directly onto Laminex™ Woodgrain panels.

**NEVER USE ANY OF THE FOLLOWING ON LAMINEX™ WOODGRAIN FOR ANY REASON:**

### Abrasive cleaners, such as:

- Jif®
- Vim
- Ajax®
- Chemico®
- Brasso®
- Oven cleaner
- Neat Janola®
- Wire wool
- Scourer pads
- Sand paper

## Fire Performance

The group classification below is generated from tests carried out and data recorded in accordance with the test procedure described in ISO 5660 2002 – Reaction to fire

Part 1: Heat release & Part 2: Smoke production rate, for the purpose of determination of the Group Classification in accordance with New Zealand Building Code Verification method C/VM2

Laminex™ Woodgrain film bonded to Lakepine MDF MR substrate

Group Number Classification 3

## Effects of Heat

Precautions must be taken to ensure that Laminex™ Woodgrain is kept clear of nearby heat sources, such as free standing fire places and space heaters, wall ovens, hot plates etc. The structural life of the substrate may be impaired if temperatures exceed 50°C for prolonged periods. Manufacturers of heat appliances referenced above must be consulted to ensure that correct clearances and ventilation are provided for.

## Health and Safety

Health and Safety precautions must be taken when working with wood panel products.

- Exposure to wood dust and/or formaldehyde may cause irritation to the eyes, respiratory system and skin, and may cause sensitisation resulting in asthma and/or dermatitis.
- Wood dust is classified as a known carcinogen. Repeated inhalation of wood dust over many years may cause nasal cancer. Formaldehyde has been evaluated by the International Agency for Research on Cancer (IARC) as group 1, carcinogenic to humans.
- Storage areas containing large quantities of Laminex™ Woodgrain must be adequately ventilated.
- Work areas must be well ventilated and kept clean. Sawing, sanding and machining equipment must be fitted with dust extractors to ensure that dust levels are kept within standards laid down by Occupational Health and Safety New Zealand, or the specific country of use. If not a dust mask conforming with AS/NZS 1715 and AS/NZS 1337 must be worn.
- Offcuts, shavings and dust must be disposed of in a manner which avoids the generation of dust and in accordance with the requirements of local waste authorities
- In end use applications all product surfaces exposed to occupied space must be sealed.

## Sustainability

The Laminex™ Woodgrain range is pressed in New Zealand on locally made, FSC certified MDF.