MELTECA®

Quality laminated panels

TECHNICAL INFORMATION

DESCRIPTION

Melteca® is a tough melamine surface laminated to Superfine™ particleboard or Lakepine medium density fibreboard (MDF) to provide a double faced, pre-finished decorative panel.

Melteca® is available in five different finishes and a range of colours, patterns and woodgrains. These are presented in the Melteca® colour brochure.

COMPOSITION

Sheets of melamine impregnated overlay are bonded to both sides of either Superfine™ particleboard or Lakepine medium density fibreboard substrate under heat and pressure. The resin on the top surface of the overlay cures, forming a tough, stain resistant finish.

Sheets are identified by Melteca® branding, including colour and other manufacturing details along the panel edges. Packs are clearly identified with the distinctive brand label.

USES

- Interior use only
- Kitchen, bathroom and laundry cabinets
- Furniture – commercial and residential
- Wall units
- Bar fronts
- Shelving
- Wardrobes
- Shop fittings and displays
- Wall linings (provided specific installation instructions are followed)

For uses other than those specified in this section, and for use in the construction industry, please contact Laminex New Zealand on 0800 303 606

SPECIFYING

When specifying Melteca® include the following information:

Colour	Refer to Melteca® colour brochure
Finish	Refer to the Melteca® Availability Guide at Melteca.co.nz
Sheet size	Refer to the Melteca® Availability Guide at Melteca.co.nz
Thickness*	In mm
Substrate	Lakepine MDF, Lakepine MRZero, Superfine™ Particleboard, Superfine™ MR Particleboard.
Edge Finish	Type of edging and colour

*Refer to the Melteca® Availability Guide at Melteca.co.nz

DESIGN CONSIDERATIONS

Edge Finishing
The edges of Melteca® can be finished using melamine edge tape, solid edging, soft forming, T-edge, solid timber clashing or direct postforming. Where the edges or corners are expected to take knocks, solid edging is recommended.

Note: Any exposed substrate must be sealed before service.

Load Bearing Applications
Melteca® is suitable for load bearing applications such as shelving, tables, desks, store displays, shop fittings, and kitchen cabinets.

When designing these load bearing items the tables below can be used to establish the correct support spacings to achieve an acceptable deflection for a given loading.

Shelf Loading Span Tables*

Single Span Shelf. (mm)			
Shelf Loadings Kg/m²**	Board thickness		
	12	16	18
25	690	930	1040
50	550	740	830
75	480	640	720
100	440	580	660
200	310	420	470
300	250	340	380
400	220	290	330
500	210	270	310

Shelf Loading Span Tables continued

Multiple Span Shelf. (mm)			
Shelf Loadings Kg/m²**	Board thickness		
	12	16	18
25	890	1190	1330
50	630	840	940
75	510	680	770
100	440	590	670
200	310	420	470
300	250	340	380
400	220	290	330
500	210	270	310

*Spans based on creep factor of 2 with final deflection of 0.006 x span

**Loadings uniformly distributed.

Performance Data

Properties	Test Method	Test Results
Resistance To wear	Taber Abraser ISO 4586-2 (6) Din 53799(4.66) AS/NZS 4266.20	patterns>150 cycles to 50% pattern removal. colours>400 cycles to substrate.
Resistance To staining	Liquid Agents for 16 hours ISO 4586 (15) DIN 53799 (4.14.2) AS/NZS 4266.25	No visible marks.
Resistance To dry heat	180°C for 20 minutes ISO 4586.2 (8) DIN 53799 (4.9) AS/NZS 4266.26	No cracks.
Resistance To cracks	70°C oven for 24 hours ISO 4586.2 (24) DIN 53799 (4.7.3) AS/NZS 4266.24	No cracks.
Steam Resistance	Steam for 2 hours ISO 4586.2 (24) DIN 53799 (4.11.2) AS/NZS 4266.23	No cracks or blisters.

Melteca® complies with the requirements of AS/NZS 1859.3 2005

LIMITATIONS

- Melteca® is not intended for use in an exterior situation.
- Surface protection (mouse pad) should be provided at regular to high use computer work stations.
- Do not use Melteca® in constant wear situations such as sink bench tops, high use shop counters, bar tops or restaurant tables.
- Melteca® must not be used in high humidity or wet areas such as saunas or showers.
- The Melteca® 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 brochure).

HANDLING AND STORAGE

- Melteca® is a high quality product and must be handled accordingly.
- Do not slide panels over each other or across sharp or gritty surfaces.
- Melteca® 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.

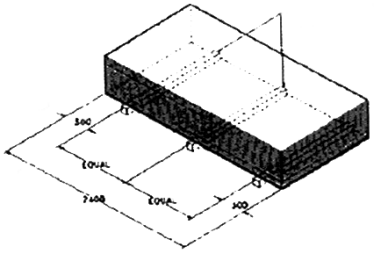

Fig. 1 Ensure that the gluts run the full pack width

Melteca® must be protected from the weather, dampness and direct wetting and must be stored inside.

Fungal and Insect Resistance
Melteca® is resistant to fungal decay and insect attack providing the moisture content of the panels does not exceed 18%.

FIRE PERFORMANCE

The Group Number Classifications below were 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 purposes of determination of the Group Classification in accordance with the New Zealand Building Code Verification Method C/VM2 Appendix A

Melteca bonded to Lakepine Medium Density Fibreboard (MDF) substrate

Group Number Classification 3

Please note: Indicative testing has indicated a change in substrate to Lakepine MRZero or Superfine particleboard (Standard or MR) will not alter the Group Number Classification.

Effects of Heat
Precautions must be taken to ensure the Melteca® 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.

Melteca® can withstand short term exposure to temperatures of 65°C above ambient without fear of ignition.

Manufacturers of heat appliances, referenced above must be consulted to ensure that correct clearances and ventilation are provided for.

DURABILITY

When stored, handled, used and maintained in accordance with this document, Melteca® will meet the durability requirements of the NZBC B2.3.1(c) and carries a 7 year limited warranty.

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 Melteca® as outlined within this document are not complied with.

DIMENSIONS

Lakepine Substrate (i)						
Thickenss (mm)	9	12	16	18	25	30
Weight (kgs/m^2)	7.15	9.4	12.24	13.72	18.4	22
Superfine Substrate (ii)						
Thickness (mm)	9	12	16	18	25	30
Weight (kgs/m^2)	6.34	8.32	10.96	12.28	16.4	19

(i) Includes Lakepine MDF, Lakepine MRZero
(ii) Includes Superfine and Superfine MR

Sheet Tolerances (mm)	
Length and Width	+/- 2.00
Thickness (on Lakepine MDF)	+ 0.35 - 0
Thickness (on Superfine™ particle board)	+ 0.40 - 0
Squareness (maximum difference between diagonals)	3.00
Straightness (maximum deviation in plane along the edge)	1.00 per metre

WORKING RECOMMENDATIONS

Machining
To obtain the best results when machining Melteca®, avoid excessive speed rates.

Guidelines for Cutting Melteca®				
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 Melteca® is made to withstand resistance to adhesion, however, this can cause problems with some glues. For gluing of Melteca® to Melteca® 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.

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

Pilot Hole Diameters for Superfine Particle Board								
Screw gauge	3	4	5	6	7	8	9	10
Pilot Hole Dia in mm	1.0	1.25	1.45	1.6	1.65	1.95	2.1	2.25
Pilot Hole Diameters for Lakepine MDF								
Screw gauge	3	4	5	6	7	8	9	10
Pilot Hole Dia in mm	1	2	2.4	2.6	2.7	3.0	3.3	3.5

EDGE FINISHING

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

The most common Melteca® edging options are:

- Melteca® Solid edging
- Melteca® Edge Tape

Melteca® Solid Edging

- Melteca® Solid Edging must be applied with an edge banding machine as cold pressing with contact adhesives is unsatisfactory.
- Melteca® Solid Edging is available in all Melteca® colours, some woodgrains and a range of widths to suit panel thicknesses.
- Melteca® Solid Edging comes primed for hot melt glue application or preglued for heat re-actived machines
- Apply at feed rates and temperatures as per the mechanical edge bander and adhesive supplier's recommendations.
- Other edge finishing includes; Soft forming, T-edge, Solid Timber clashing, direct postforming or coating with a paint or polyurethane.

Melteca® Edge Tape

- Melteca® melamine-coated edge tape is available in all Melteca® colours; woodgrains and a range of widths to suit panel thicknesses.
- Care must be taken when applying around tight curves.

Application:

Mechanical Edge Bander

- Edge tape must be applied at feed rates and temperatures recommended by machinery and adhesive suppliers' recommendations.

Hand Ironing

- Ensure iron is adjusted to cotton / linen setting temperatures and the surface is clean.
- A layer of paper between the iron and tape will avoid burning or marking the tape surface.
- Repressing firmly with a cork block whilst still hot will ensure an improved bond is achieved.

Trimming

- Trim flush to the surface using a veneer trimming tool, plane blade or broad chisel.

Finishing

- Sand lightly along edge using a fine grit sand paper at an angle to remove the arris.

CARE AND CLEANING

Regular cleaning requires only a wipe down with warm soapy water, follow up with dry cloth. The use of streak-free glass cleaner and a soft cloth can also maintain the surface.

NEVER USE ANY OF THE FOLLOWING ON MELTECA® FOR ANY REASON:

Abrasive cleaners, such as

- Jif
- Vim
- Ajax
- Chemico
- Brasso
- Mr Muscle cleaner
- Neat Jonola
- Wire wool
- Scourer pads
- Sand paper

Spills, Stain and Mark Removal

Stubborn Marks or Stains

Clean with Ajax spray and wipe;
a soft nylon nail brush will assist if dirt particles prove hard to move.

Hair Rinse, Bleach, Oven Cleaners

Wash with hot soapy water and wipe dry.

Fabric Dye

Cold water wash and wipe dry.
Then methylated spirits, then wipe with warm soapy water and wipe dry.

Battery Acid Hydrogen Peroxide, Glue Hardeners

Cold water wash and wipe dry

Hair Dye

Wash with methylated spirits and wipe dry followed by mineral turpentine, then wipe with warm soapy water and wipe dry.

Leather Dye

Wash with methylated spirits and wipe dry followed by mineral turpentine, then wipe with warm soapy water and wipe dry.

Smearing, Fingermarks, Marking from Cold or Hot Dishes, Stickiness

Apply 1 or 2 applications of acetone (from pharmacy), then wipe with warm soapy water and wipe over with dry cloth.

Newsprint

Methylated spirits or mineral turpentine then wipe with warm soapy water and wipe dry.

Rust

Vinegar or lemon juice.

Pencil

Water and cloth.

Felt Pen or Dry Marker

Methylated spirits or acetone, then wipe with warm soapy water and wipe dry.

Paint

Acetone or duco lacquer thinners (from paint shop), then wipe with warm soapy water and wipe dry.

Glue - Contact Type

Ados solvent N (from paint shop), then wipe with warm soapy water and wipe dry.

Persistent Stains or Marks, Bleaching, Fading, Colour Changes

Refer to Laminex New Zealand Customer Services

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 in 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 a group 1, carcinogenic to humans.
- Storage areas containing large quantities of Melteca® 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.

For further information and Safety Data information, please phone the Laminex New Zealand Customer Services team on 0800 303 606

TECHNICAL SUPPORT

As not all product use options can be described herein, additional end use and specifying information is available as a complimentary service.

For further information, please phone Customer Services on 0800 303 606

✆ NEW ZEALAND 0800 303 606

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