Trade Essentials®
WHITEBOARD

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

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 Trade Essentials® Whiteboard branding, including other manufacturing details along the panel edges. Packs are clearly identified with the distinctive brand label.

USES

- Recommend for carcass use only
- 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.

DESIGN CONSIDERATIONS
Edge finishing

The edges of Trade Essentials® Whiteboard panels should be finished with a PVC or ABS edgetape solution. For the range of thicknesses, colours and finishes available, refer to the Trade Essentials® Whiteboard Availability Guide at laminex.co.nz

Note: Any exposed substrate must be sealed before service.

Load bearing applications

Trade Essentials® Whiteboard 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			
Shelf Loadings kg/m²**	Board thickness		
	12mm	16mm	18mm
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

Multiple span shelf			
Shelf Loadings kg/m²**	Board thickness		
	12mm	16mm	18mm
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	AS/NZS 4266	>400 to 5% >600 to removal back to substrate
Resistance to staining	AS/NZS 4266	No visible marks
Resistance to dry heat	AS/NZS 4266	No cracks
Resistance to cracks	AS/NZS 4266	No cracks
Steam resistance	AS/NZS 4266	No cracks or blisters
Scratch resistance	AS/NZS 4266	≥ 5 Newton

Trade Essentials® Whiteboard complies with the requirements of AS/NZS 1859.3 2005

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

HANDLING AND STORAGE

- Trade Essentials® Whiteboard is a high quality product and must be handled accordingly
- Do not slide panels over each other or across sharp or gritty surfaces
- Trade Essentials® Whiteboard 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.
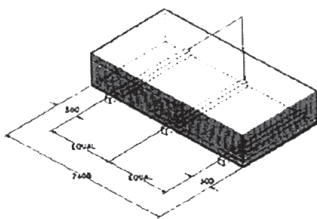
Fig 1. Ensure that the gluts run the full pack width

Trade Essentials® Whiteboard must be protected from the weather, dampness and direct wetting and should be stored inside.

Fungal and insect resistance
Trade Essentials® Whiteboard 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

Trade Essentials® Whiteboard 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 that Trade Essentials® Whiteboard 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.

Trade Essentials® Whiteboard 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, Trade Essentials® Whiteboard will meet the durability requirements of the NZBC B2.3.1(c) and carries a 5 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 Trade Essentials® Whiteboard as outlined within this document are not complied with.

DIMENSIONS

Lakepine substrate (i)						
Thickness (mm)	9	12	16	18	25	30
Weight (kgs/m²)	7.15	9.4	12.24	13.72	18.4	22
Superfine substrate (ii)						
Thickness (mm)	9	12	16	18	25	30
Weight (kgs/m²)	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 particleboard)	+ 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 Trade Essentials® Whiteboard, avoid excessive speed rates.

Guidelines for cutting Trade Essentials® Whiteboard				
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 Trade Essentials® Whiteboard is made to withstand resistance to adhesion, however, this can cause problems with some glues. For gluing of Trade Essentials® Whiteboard to Trade Essentials® Whiteboard 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 particleboard								
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

GUIDELINES FOR CNC MACHINING OF TRADE ESSENTIALS® WHITEBOARD 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.

EDGE FINISHING

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

Edgetape for Trade Essentials® Whiteboard boards must be applied with an edge banding machine as cold pressing with contact adhesive is unsatisfactory.

- Edgetape comes primed for hot melt glue application or preglued for heat re-activated machines

- Apply at feed rates and temperatures as per the mechanical edge bander and adhesive supplier's recommendations

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 TRADE ESSENTIALS® WHITEBOARD 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 PS (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 0800 303 606.

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 Trade Essentials® Whiteboard 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.

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 **Laminex New Zealand™ Customer Services on 0800 303 606. laminex.co.nz**