



Formica ColorCore® is a high quality surfacing material and, although most of the equipment and techniques used in the fabrication of normal laminates will apply, some additional techniques may be necessary to utilise the full potential of the product.

APPLICATIONS

Formica® ColorCore® can be used in a variety of applications. These include: counters, bench and table tops, store fixtures, office furniture, vanity units, display work, reception areas, wall panelling, toilet partitions, and door and drawer fronts.

It is also suitable for medical, dental and food preparation areas.

WHEN SPECIFYING

Materials shall be Formica® ColorCore® as manufactured by Laminex New Zealand Colours and/or patterns shall be..... in matt finish.

Product Characteristics	
Sheet Sizes	3050 x 1220mm
Thickness	1.3mm (nominal)
Mass	1.74kg/m ²
Finish	Matt

SUBSTRATES

Formica® ColorCore® should be bonded to a suitable substrate such as high moisture-resistant and standard particleboard, high moisture-resistant and marine grade ply or medium density fibreboard. A smooth surface is important. Rougher substrates such as large-chip particleboard may result in a visually unacceptable product.

WALL PANELS

When using Formica HPL in a wall panel application, it is recommended that the laminate is bonded to a high quality substrate, such as Lakepine MDF and balanced by bonding laminate of the same thickness to the rear of the panel to minimise bowing.



FIRE PERFORMANCE

The Group Number Classifications are generated from tests carried out and data recorded in accordance with the test procedure described in ISO 5660 2002 – Reaction to Fire test – 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

Cone Calorimeter testing in accordance with ISO 5660 and New Zealand Building Code (NZBC) Verification Method C/VM2 Appendix A

Result:
Group Number Classification 3
*Laminate adhered to Lakepine MDF substrate

LIMITATIONS

Do not use externally or in areas where prolonged exposure to temperatures exceeding 135° may occur. Must be supported by recommended substrate over entire surface area. Do not bond directly to plaster, concrete walls or gypsum wallboard.

** Formica is no different from any other material in that darker colours, semi-gloss and gloss finishes show scratches and superficial wear and tear more readily than lighter colours and lower gloss surfaces.*

PROPERTIES

Composition

Formica® ColorCore® consists of several solid colour layers of phenolic resin-impregnated paper with a layer of melamine-impregnated paper applied to the decorative side. The layers are bonded under heat and pressure. The back of the laminate is sanded to permit good bonding.

Formica ColorCore is not recommended for post forming.

SPECIFICATION

AS/NZS 2924.1:1998, Type HGP: High Pressure decorative laminates - sheets made from thermosetting resins.

Thickness Tolerance

A variation of no more than ±0.10mm.

Appearance

Minimal defects permissible when inspected in accordance with Australian /New Zealand Standard AS/NZS 2924.1:1998

Resistance to Surface Wear

Average wear resistance of not less than 350 taber cycles. Initial wear point not less than 150 taber cycles.

Resistance to Immersion in Boiling Water:

No more than 19% increase in weight and 21% increase in thickness for 1.3mm laminates. No more than a slight change in



gloss and/or colour.

Resistance to dry heat

No more than a slight change in gloss and/or colour after 20 minutes in contact with a container holding glycerol tristearate at 180°C for velour finish.

Resistance to Scratching:

Resists a force of 2 Newtons when scratched with a diamond stylus.

Dimensional Stability:

After exposure to controlled high and low humidity conditions, a dimensional change of no more than: 0.75% with the grain and 1.25% across the grain.

Resistance to Impact:

No visible damage when subjected to an impact of 20N from a 5mm steel ball mounted at one end of a spring-loaded bolt.

Resistance to Staining:

Reagent groups 1 and 2.: no visible change. Reagent group 3: slight loss of gloss and/or colour.

Resistance to Colour Change in

Artificial Light:

No more than a slight colour change in Xenon arc light (minimum 6 on Blue Wool Scale).

Formica® ColorCore® comply with the colour fastness requirements of the Australian/ New Zealand Standard AS/NZS 2924.1:1998. They have good colour retention under normal conditions of internal use.

Prolonged exposure to sunlight may cause some change in colour. For this reason, Formica® ColorCore® are not recommended for external use.

Resistance to Cigarette Burns:

No more than a moderate change in gloss and/or moderate brown staining.

Resistance to Blistering:

After the sample temperature has reached 163°C at the specified heat up rate, a minimum time of 15 seconds should elapse before blistering occurs.

Resistance to Steam:

No more than a slight change of gloss and/or colour.

DESIGN AND SPECIFICATION NOTES

PRODUCT DATA

Handling and Storage

Because ColorCore is slightly more brittle than normal laminate it should be treated more carefully.

ColorCore should always be stored horizontally. Vertical storage is not recommended because of the risk of edge damage.

Boards should be stacked neatly, since projecting edges and corners are vulnerable to impact damage. If the sheet edges are accidentally damaged extra care should be exercised when lifting to prevent the sheet from tearing.

Storage conditions should be the same as those recommended for normal Formica® laminates.

Cutting

ColorCore can be cut using the same standard tools and equipment as used for other Formica decorative laminates. Cutters and saws should all be TCT and must be kept sharp to avoid chipping.

Because the slightly more brittle nature of ColorCore may result in chipping on the underside when cutting on circular saws, precautions should be taken to minimise the risk. Such precautions include: lowering the saw in the saw bench; reducing the throat of the saw by placing a piece of hardboard under the cut; changing the saw blade for one with negative angle teeth; or simply allowing an extra amount for edge trimming.

Large sheets may be cut by scoring but extra care must be taken to prevent shattering.

Cutting ColorCore on a laminate slitter is not recommended.

When cutting ColorCore by hand using a fine toothed saw, it should be well supported on both sides of the cut to prevent tearing.

Bonding and Pressing

ColorCore may be hot or cold pressed and all the normal recommendations for bonding Formica laminates should be followed.

The most important point to remember is that the solid colour has no dark edge to mask the glue-line. Tight joints at right-angle intersections and the use of non-pigmented or transparent drying adhesives is essential to achieve a visually satisfactory end result.

Substrates

ColorCore may be used with any substrate suitable for normal Formica decorative laminate.

Adhesives

Although almost all normal laminate adhesives can be used to bond ColorCore, contact adhesives (particularly hand applied) are not recommended.

These flexible adhesives cannot properly restrain ColorCore, and this can lead to stress cracking and edge lifting unless special precautions are taken.

Since there is no dark edge to disguise the glue-line, the wrong choice of adhesive may result in the end product being visually unacceptable. Clear-drying PVA or UF adhesives give the best results, but will of course require sustained pressure.

If the use of contact adhesives is unavoidable then perimeter bonding, using a combination of adhesives, may be used to good effect. The technique involves bonding the main area of the panel with contact adhesive, and bonding a 25-30 mm perimeter strip with PVA or UF. The edges should be clamped or taped down to produce a tight joint. This technique should also be employed around the edges of cut-outs.

The glue-line should be kept as thin and even as possible, consistent with achieving a sound bond. This is particularly important at the arrises, where a thick glue-line would spoil the desired monolithic effect.

Pigmented and dark coloured adhesives such as Resorcinol should be avoided, since the resulting coloured glue-line would be clearly visible in the finished product. If the use of dark coloured adhesives is unavoidable some modification to the normal bonding sequence



may be necessary to enable the final piece of ColorCore to be bonded with a more suitable adhesive. For instance, hot-melt or neoprene could be used for pre-edging, and the main panel area bonded with PVA.

Post-applied edges will require more care in fabrication and choice of adhesive in order to produce an acceptable result. Hot-melt and contact adhesives should not be used for post-applied edging if a seamless joint effect is required. ColorCore laminates are offered in a limited colour palette only.

Backing

Where optimum flatness is required, use the same ColorCore laminate on both sides. Where a degree of bow can be tolerated (but within BS 4965 limits), or for panels that are fixed to a rigid substructure, use ColorCore Balancer.

Bending

ColorCore can be bent, but only to large radii because of its inherent stiffness. Strips 60 mm wide can be cold bent to a minimum radius of 150 mm, but the minimum radius will increase with an increase in strip width. Heat will facilitate bending, but ColorCore is not postformable.

The solid seamless appearance for postformed components can be achieved by capping the ends in ColorCore.

Note: Due to the special characteristics of ColorCore, exact matches between ColorCore and Formica® Colors laminates may not always be possible. Formica Group recommend the comparison of actual laminate samples prior to specification or fabrication. ColorCore laminates are offered in a limited colour palette only.

Machining and Finishing

All conventional tools and machines used for normal Formica® laminates can be used for fabricating ColorCore®, and all general recommendations relating to fabrication should be followed. To achieve aesthetically acceptable results the flushing off of the first piece of laminate to be applied, whether it is the edge or the main surface area, is critical. The overhanging ColorCore must be trimmed absolutely flush with the surface of the substrate, otherwise visible gaps will be evident at the arrises.

Arrises must be trimmed with hand trimmers in the usual manner, with either bevelled or small radius TCT cutters. For best results hand finishing with a fine file and a cabinet scraper is recommended. Generous bevels and radii up to 2.5 mm may be produced at the arrises, but it should be remembered that such large bevels and radii require more finishing to blend with the surrounding surface.

When filing or sanding the edges flush with the substrate, always work towards the substrate to prevent surface chipping. Sanding belts should be no coarser than 100 grit.

When trimming ColorCore down to the surface of normal laminate take extra care not to expose the brown core of the latter at the intersection.

Special Effects

The solid colour of ColorCore enables a wide variety of decorative effects to be achieved by techniques such as multi-layering, engraving, routing and sandblasting, or by combinations of any of these. The use of hardwood edges in conjunction with ColorCore can also create very interesting details.

Multi-Layering

Multi-coloured sandwiches of ColorCore can be bonded together and then sawn at 90° to the glue-line. These laminate strips can then be used for pre-lipping the edges of table tops, etc. for a solid laminated look.

Laminated work of this kind should be bonded with an epoxy adhesive and flat pressed. Prior to bonding, the decorative surfaces of the inner laminations must be thoroughly sanded to provide a good key for the adhesive.

Engraving and Routing

The surface of ColorCore may be engraved or routed to a maximum depth of 0.8mm. Interesting effects may be achieved by this method, ranging from straightforward sign-writing to intricate monochrome patterns and designs.

Designs in two or more colours can be achieved by a combination of multi-layering and routing. This technique entails bonding one colour on top of another and routing through to reveal the underlying colour or

colours. Adhesives and bonding procedure should be the same as for multi-layering.

It should be remembered that cutting through the surface will release tension to some degree, and it may be necessary to machine the reverse side to maintain panel stability and prevent bowing.

A slight colour change may be noticeable in the machined areas due to differences in gloss levels, particularly with dark colours. This difference in appearance can be minimised on narrow engraved lines by the application of a light silicone-free oil. Alternatively, large routed areas may be scraped and polished using progressively finer grades of glass paper, and a final buffing with a buffing paste.

Sandblasting

Sandblasting is another technique that can be used to create interesting decorative effects with ColorCore, with surface texturing ranging from subtle changes in gloss level to deep sculpturing to a maximum depth of 0.6mm to 50% maximum of thickness.

Fabrication Guidelines

In order to produce a tight joint allow up to 6 mm overhang when applying the first piece of ColorCore to the edge of the substrate, for subsequent machining flush with the surface. To avoid chipping, use sharp tools to machine ColorCore flush with the substrate. When sanding always work towards the substrate, using a fine grit sanding belt. Take care not to round-over the edge as this will result in a wide glue-line.

Apply the surface laminate with a thin (but sufficient) even coating of adhesive, again allowing a slight overhang. Use appropriate bonding pressure to achieve a tight glue-line. Machine the finished edge of the surface laminate with a bevel or radius cutter, and file or scrape smooth.