

Laminex® DiamondGloss® is a high gloss laminate with mark and scuff resistance superior to traditional laminates. It may be readily heat formed down to a radius of 8mm in the machine direction (MD), using special equipment without loss of durability or appearance.

APPLICATIONS*

Laminex® DiamondGloss® is widely used for countertops, bench tops, vanity units, bars, store fixtures and other applications where good appearance, resistance to marking and scuffing, and resistance to stain and heat from ordinary sources is required. Laminex (Polar White) DiamondGloss can also be used for whiteboards provided instructions contained in the Laminex Factsheet - Care & Maintenance are followed.



Product Characteristics	
Sizes	3595 x 1395mm Refer to Laminex HPL Availability Guide for cut sheet sizes
Thickness	0.7mm (nominal) (-0.1+ 0.1mm)
Weight	1.0kg/m ² approx.
Finish	High Gloss
Colours and Pattern Range	Refer to Laminex HPL Availability Guide

Fire Tests	
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	

Properties (AS/NZS 2924.1)	
Property	Typical Values
Resistance to Surface Wear	Initial wear not less than 150 cycles. Average wear not less than 350 cycles
Resistance to Immersion in Boiling Water	No more than a marked change of gloss and/or colour. Gain on weight of not more than 19%
Resistance to Dry Heat at 180°C	No more than a moderate change of gloss and/or colour
Resistance to Steam	Marked change of gloss and/or colour
Dimensional Stability	Dimensional change of not more than 0.7% with grain and 1.2% across grain
Resistance to Staining	Reagents Groups 1 and 2 = No visible change. Reagents Groups 3 and 4 = No more than a moderate change of gloss and/or colour

Resistance to Colour Change in Artificial Light*	Not more than slight colour change in Xenon arc light Minimum 6 on Blue Wool Scale
Resistance to Cigarette Burns	No deterioration other than moderate change in gloss and/or moderate brown staining

SCUFF RESISTANCE

More than 95% gloss retention after being scrubbed with a 3M Scotch-Brite™ Heavy Duty scouring pad attached to a Sheen Model 903 Wet Abrasion Scrub Tester, using 800 gram applied weight and 30 scrubs.

WHEN SPECIFYING

Materials shall be Laminex DiamondGloss laminate as supplied by Laminex New Zealand. Colours and/or patterns shall be

* Laminex DiamondGloss laminate has good colour retention and dimensional stability in normal interior applications. However, prolonged exposure to sunlight may cause shrinkage and/or some change in colour. Laminex DiamondGloss laminate is therefore not recommended for external applications or interior applications with prolonged exposure to direct sunlight.

PROCESSING

Board Substrate Bend Profile

Laminex DiamondGloss should be fully supported when glued. Do not bond directly to plaster, plasterboard or concrete. The correct profile on particleboard or medium density fibreboard can be obtained by using specially shaped router blades with a radius not less than 8mm. Profile should be uniform along the full length of the board with none of the following faults to either substrate or profile:

1. High spots
2. Bumps
3. Low spots
4. Ridges
5. No surface dust or chips

For consistent results it is recommended the profile be smooth and have a gentle taper leading into the profile from the board's surface.

GLUING AND BONDING TIPS

All high gloss laminates, due to their high reflective surface, have an inherent tendency to display undulations. To minimise this effect the following recommendations may assist to provide the best results.

1. Cross linking PVA Gluing (CPVA) System: CPVA glue is a water based adhesive that when applied to a substrate causes the fibre to swell. Adding heat to the process produces steam, which exacerbates the swelling. High gloss laminates have a greater tendency to show this swelling/unevenness through to the top of the sheet. Too much glue will amplify unevenness because of the higher water content. Ensuring that glue is not applied above the required bonding level will reduce the effect, as will maintaining a uniform glue line quality and consistency. Similar to adhering all laminate, the glue line should be evenly applied avoiding lumps of glue, sawdust, chips etc, as they may fracture the laminate when pressure is applied during bonding or cause blistering during post-forming. Reference the adhesive manufacturer's directions. If the glue is not evenly distributed, at the time of pressing, high points can be telegraphed by the gloss surface.

2. Using a Poly Urethane glue (PUR), which contains no water, will provide a better result.

3. Low temperatures and pressures on the press bonding equipment will provide best results. The lower the pressure the better the surface appearance. Using a flat surface or pad, such as 3mm MDF, to press against the decorative surface provides smoother results.

4. Maintain glue applicators to avoid contamination. Contamination may result in pressing imperfections into laminate surface. Similarly, maintain pressing surfaces free of dints and lumps.

5. Contact glue is generally not recommended for high gloss surfaces

FORMING PROFILE

Laminex DiamondGloss grade is designed to be post-formed using commercially specific post-forming machines.

- Forming to an 8mm radius in the machine direction (MD) is recommended.
- Forming in the cross direction (CD) is not recommended. (Guideline for the CD radius is 15 times the individual laminate sheet thickness. Choosing to form an end roll in the CD of the laminate is the decision of the fabricator).

Laminex DiamondGloss has very good operating tolerance between the heat required to bend and the additional heat exposure time required before the laminate blisters.

PROFILE TIPS

- Control of heat-up rate for laminate is critical, and Laminex DiamondGloss is no exception. With reference to the temperature indicator 155°C Tempilaq.

Note

The sheet thickness, ambient temperature and drafts close to the work piece, board temperature, or speed of movement of forming may affect uniform heating and overall heating time over the distance of the profile.

PROBLEM SOLVING

The most common problems in post-forming are normally caused by:

Cracks

Contaminated and/or uneven substrate, unsuitable profile, unsanded rough profile, or cold substrate, insufficient heat, uneven heat distribution or heat up rate requires optimising.

Blisters

Uneven heat distribution, warped material, too much heat or too fast heat up rate, too much or unevenly distributed CPVA.

Delamination

Insufficient heat, insufficient or unsuitable adhesive, insufficient bonding.

PROTECTIVE FILM

Laminex DiamondGloss grade is supplied with a Polyester protective film which provides a protective layer to the high gloss surface for transport and handling. The film can be heated when the laminate is subjected to post-forming processes and can be released afterwards.

During film application some small particles may become trapped between the laminate and film. These particles can cause an indentation when the laminate is subjected to press bonding. It is recommended that the surface is inspected and any specks removed prior to pressing.

Consequently the film may be removed and the laminate cleaned prior to pressing and post-forming and then the finished laminated work piece recovered for delivery to the worksite.

The polyester film has a shelf life and can be difficult to remove after nine months from application to the laminate. This is the nature of the film.

FOOTNOTE

This information is intended as a guide only and should not necessarily be regarded as applying to all situations. It is therefore advised that if problems arise which are not covered, then the technical services section of Laminex New Zealand should be contacted through your local branch.

The data in here is believed to be accurate to the best of our knowledge, but users should carry out their own assessment of the product to satisfy themselves that it is suitable for their requirements.