



ECONOMY ♦ EXCELLENCE ♦ ETHICS

**UNI<sup>+</sup>**

MERINO UNI+ LAMINATES  
TECHNICAL GUIDE



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# 1 INTRODUCTION

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Merino Unicolor Laminates are decorative laminates (HPL) that create a very aesthetic look owing to their coloured Kraft paper. This eliminates any brown/black seams that are commonly seen in standard laminates and makes it a very aesthetic product ideal for tabletops, countertops and more.

Unicolor or UNI+ laminates are classified as BTS grade as per EN438 standards, and offer performance as per its specifications.

# 2 PRE-FABRICATION

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UNI+ laminates are slightly brittle compared to HGS grade Decorative Laminates. Careless handling and transport can cause issues which may affect the quality of the product and the installation. Please keep the following guidelines in mind to ensure best results.

## 2.1 TRANSPORT, STORAGE & HANDLING

All transport, storage and handling guidelines for Merino's HGS grade decorative laminates are also applicable to UNI+ laminates. Key points to consider-

- **TRANSPORT**

UNI+ Decorative Laminates must be transported laid flat.

While being transported, it is recommended to keep protective boards on the top and bottom of the stack. Use protectors on the edges, as cracked corners can cause issues during fabrication.

- **HANDLING**

UNI+ laminates should be handled carefully to avoid damage to the product. Avoid damage to the product- especially the edges. Minor, localized damage to the edge may not seem important, as laminate sheets are cut to size for fabrication. However, invisible stress cracks can form and sometimes propagate through the material, causing issues with the product over time

Decorative face of the laminate may get damaged on sliding over other surfaces, including other laminate sheets. Therefore, sliding the sheets IS NOT recommended, the sheets need to be lifted instead.

Merino recommends the use of 2 workmen to lift the sheet, especially if the sheets are sized over 3.5 feet. Always ensure the workmen walk at a steady pace, holding the sheet with limited slack, as excessive bowing can strain the surface of the laminate.

Never allow the laminates to touch the ground or the walls while they are being carried.

If forklifts and similar mechanized vehicles are used to load or unload a vehicle, ensure that the pallets are clean and structurally sound.

- **STORAGE**

Merino UNI+ Decorative laminate sheets should be gently stacked over each other in a horizontal manner, in a back-to-back configuration. The sheet at the bottom of the stack must have the decorative face downwards, with a flat, protective layer.

Use a protective, flat board at top and bottom of the stack. This helps maintain a uniform pressure on the sheets and prevent any warpage in bulk stock. In case such a board is not readily available, the topmost sheet may be placed with the sanded side upwards instead.

To avoid risk of damaging edges, Vertical storage is not recommended for UNI+ laminates.

## 2.2 PRECONDITIONING & THE ENVIRONMENT

Preconditioning is one of the most important considerations for achieving a quality product installation.

Follow the preconditioning guidelines as laid down in the document for standard grade High Pressure Laminates. The best approach is to make sure both sides of the laminate panel as well as the substrate experience the exact same conditions. In most cases the recommended conditions are storing the entire stock (liner, backer, adhesives, substrate) at 24C temperature and 55% relative humidity for 48 hours. These numbers may vary slightly depending on general environment conditions in the geographical area.

Stored stock of laminate should be rotated such that older sheets are used first. The place of storage should be well ventilated and protected from moisture. Laminates should never be in direct contact with the floor or outside walls. All preconditioning should be performed at the fabrication site.

## 2.3 SUBSTRATES & ADHESIVES GUIDANCE

Generally, Merino UNI+ laminates can be paired with any substrate that is recommended for Merino's HGS grade decorative laminate.

For bonding the laminate to the substrate, adhesives which are transparent or set to a very light colour are recommended. Any adhesive with a darker shade will stand out due to absence of a seam for the glue line to blend into. Dark adhesives such as Resorcinol or adhesives which don't set to a clear colour should be avoided.

Semi-rigid and flexible adhesives are not recommended for UNI+ laminates. The material characteristics of the laminate do not go well with contact adhesives which are elastomeric in nature and can lead to peeling (lifting). Therefore, contact adhesives must be avoided as far as possible.

PVA or Urea-Formaldehyde based adhesives are recommended.

In addition, care should be taken to ensure proper balancing of the final panel by opting for a high pressure balancing or high pressure phenolic laminate known as Backer, on the other side of the substrate. For best results, use same UNI+ laminate sheet as a backer.

# 3 FABRICATION

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Merino Unicolor Laminates (HPL/HPDL) are BTS grade decorative laminates that create a very aesthetic look owing to their colored Kraft paper. While UNI+ uses a different resin composition compared to HGS grade laminates, the laminate itself has a uniform composition, and most tools used for woodworking can also be used to fabricate them into a composite panel assembly, keeping in mind a few guidelines.

Fabrication of UNI+ laminates for most residential and commercial applications is preferably done using a combination of Power tools as well as Manual tools. If using UNI+ laminate in MR+ finish, ensure that the high gloss layer is well protected during the fabrication process and the protective layer is removed only when fabrication has been completed.

Plywood is not recommended as substrate for UNI+. The product expands more in width than in length and hence width of more than 2 ft is not recommended. Follow the fabrication guide closely to ensure best results.

### 3.1 CUTTING

Merino UNI+ laminates can be cut with cutting tools recommended for Merino's HGS grade laminates, keeping in account the slight difference in brittleness.

Some guidelines to avoid chipping and surface cracks-

- When cutting the laminate to size using a stationary or table saw, ensure the sheet is flat on the saw table. The decorative face should face up. Use a sacrificial board and add a guide to serve as a fence, this helps reduce flutter during movement of the sheet through the saw blade. Always ensure that the blade cuts cleanly through the surface, and that the blade doesn't become too hot.
- By lowering the saw, the exit angle will be more favorable and thus lead to reduced chances of chipping on the underside. Also reduce the throat of the saw by placing a piece of hardboard below.
- Use sharp, TCT blades with negative hook angle and larger gullets that allow for easier removal of kerf and prevents burn marks.
- Use a scoring saw, though care must be taken to prevent shattering.

AVOID using laminate scissors or slitter to cut Unicolor laminates. Doing so may cause chips and cracks on the edges of the cuts, which can extend into the entire sheet over time. Tools such as belt sanders should also be avoided for Unicolor laminates, as they may leave rough edges and an uneven glue line.

Always trim to a higher margin that can be later removed after bonding.

### 3.2 BONDING AND TRIMMING ADVICE

Always follow the Prefabrication checklist for choosing the appropriate substrate and adhesives for the project.

A key expectation for bonding UNI+ laminates is that the resulting glue line should be thin, uniform and not interfere with the aesthetics of the installation. Therefore, a thin, even coating of adhesive should be applied with enough bonding pressure that results in a thin, tight glue line. Always apply adhesives on both the substrate and the laminate.

The recommended adhesives are PVA and UF, and the adhesive manufacturer's guidelines should be followed. Ensure uniform, sustained pressure is applied during the bonding process.

If contact adhesives are used, panel width should be restricted to a maximum of 600mm. If ambient conditions for the installation remain warm and dry, contact adhesives should be avoided.

Once the rough-cut laminate has been bonded to the substrate, it should be allowed to set for a few hours before attempting any further fabrication.

Once bonding of the panel assembly is complete, trimming is needed to remove the oversized edges of the assembled panel. Follow the trimming advice of standard, decorative HPL.

It is recommended to trim UNI+ edges flush with the surface. The tools used for trimming must be sharp and well maintained.

Routers are commonly used to trim the edges, though a hand trimer such as a bevel cutter can also be used. 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.

Following the trimming process, edges must be routed smooth.

### 3.3 CUT-OUTS, HOLES AND ADDING FASTENERS

Do not use square-cut inside corners, otherwise stress cracking or breakage may occur. All internal corners and cut-outs should be rounded as far as possible. A radius of 4 mm or larger in the corners is recommended to minimize stress cracking. For larger sized cuts, the radius must also be increased. All cut-outs should be routed or filed to ensure smooth edges.

The use of non-rigid, elastomeric adhesives such as contact adhesives may cause stress cracking. When contact adhesives are used, the minimum radius for inside corners must be 5mm.

If UNI+ laminate strips are applied on the edges of cut-outs, they should be taped down during bonding.

### 3.4 DRILLING

- When it comes to tool selection, an electric drill with HSS bits is the tool of choice for most kinds of drilling applications. Another important selection to be made is the type of bits used in the drill. While TCT bits may prove to be economical due to their long life, Rectified HSS bits are sharper. Longer tool life helps improve reproducibility while sharper blades improve the quality of the cuts.
- In case of non-stationary drills, it is important to ensure the appropriate pressure is applied. Pressure should be scaled up and down in a gradual manner, especially during entering and exiting the laminate. By controlling the feed speed of the drill, the panel is less likely to be damaged.
- At least 1.5mm of material should be left while blind drilling. When drilling into the edge, at least 3mm clearance should remain on all sides of the hole.
- Screws and bolts should be slightly countersunk. Use a lower rotational speed to make countersunk holes. Drill oversize holes (at least 0.5 mm or 0.02" larger in diameter) for screws and bolts. This allows the screw to adjust with the slight dimensional movements of both the laminate and the screw, preventing cracks around the hole.
- When drilling through-holes, ensure a hardwood panel is placed at the exit face. This prevents any splintering or shocks to the material surface when the drill exits the material.
- Edges of the hole should be smooth and cleaned after drilling. Otherwise stress cracking may occur.

### 3.5 EDGE PROFILING & FINISHING

Creating a good, finished edge is highly recommended when using UNI+ laminates. Besides the loss of aesthetics from improper edge profiling, impacts on any unprotected UNI+ panel edges may become a cause for cracks and damages.

The best option for creating a truly seamless look with a UNI+ laminate is to use End Caps. When applying edge caps using UNI+ laminate, allow 5mm of lip (or overhang) perpendicular to the surface. When bonding the edge cap to the edge, use tape or clamps to apply consistent pressure.



UNI+ laminate should also be bonded with a slight overhang. This allows for machining both the surface laminate and the edge cap laminate to tight, flush fit.

While making corners, maintain a minimum radius of 4mm. After cutting, the sides should be filed with a smooth sandpaper, this helps ensure longevity of the panel. When filing the edges with a file, keep in mind to file in one direction only. For final finishing of the trimmed edges, use a sanding belt be no coarser than 100 grit, taking care to always work towards the substrate to prevent surface chipping.

Full postforming is not recommended as UNI+ laminates can only bend to a certain extent without compromising the material itself. In case postforming is necessary for the installation, the radii must be at least twice as large as HGP laminates.

## 4 POST FABRICATION

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Once the fabrication of UNI+ laminates is completed, it is safe to remove the protective film. Please ensure the film doesn't stay on the surface beyond a few months as it may leave a residue on the surface that can become hard to remove with time.

## 5 MAINTENANCE & CARE

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Merino Unicolor laminates are easy to clean and maintain. Follow these guidelines for maintaining the decorative laminate-

- **Care**  
Unicolor laminates have similarly colored core, so scratches are less visible than laminates with brown core. Even so, take care to not place any sharp or abrasive objects roughly on the surface. Protect the surface from any heat sources and moisture. If placing any hot utensil, always use a shield or pad.
- **Cleaning**  
In case of ordinary stains, Merino recommends cleaning the surface gently with a clean, damp, soft cloth.  
For persistent stains, follow the 2-step cleaning procedure. First, wipe the surface using a damp cloth or sponge with mild detergent. Next, wipe it dry with another clean cloth or sponge.  
Type 2 stains such as Coffee or tea stains can be removed using a soft bristle brush.