Thermally Fused Laminate

HOW IT'S MADE

Thermally fused laminate or TFL is made by fusing a resin-impregnated sheet of décor paper directly to a substrate. There is no kraft paper used in TFL, and the resulting panel is ready for finishing. The décor paper generally weighs between 60 and 130 g/m2 and is the same as the paper used in the production of HPL, making for easy matching across materials. Heat and pressure activate the resin in the saturated TFL sheet, creating a cross-linked bond with the substrate. This effectively seals the substrate. Particleboard and MDF are ideal substrates for TFL because they are consistent, uniform in strength and free of defects.

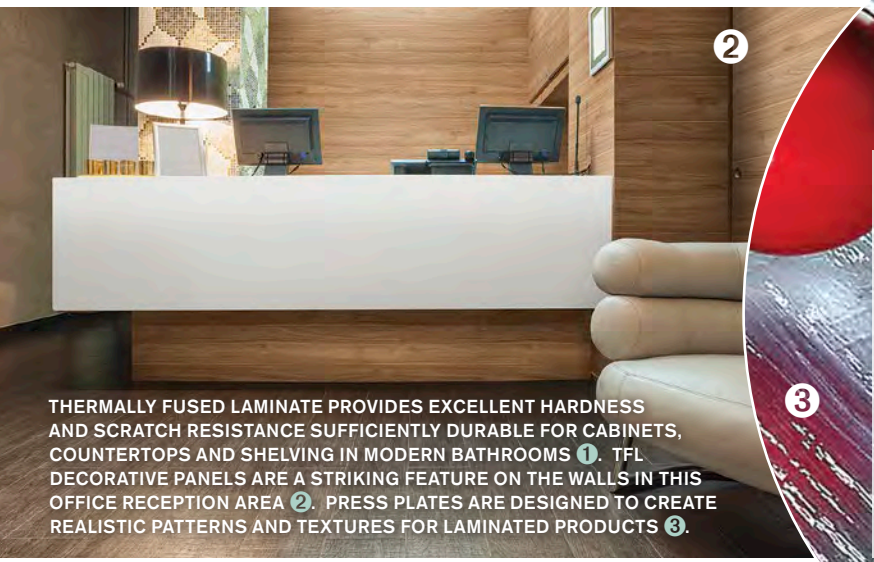
LEADING APPLICATIONS

Laminate Flooring • Cabinetry • Countertops • Shelving • Store Fixtures • Home Office Furniture •

Thermally fused laminate decorative panels can be manufactured with enhanced visual and performance characteristics. Surface textures are created with steel press plates that emboss the decorative overlay to heighten the realism of wood grain, stone or abstract designs. Steel press plates can also be used to create or control the gloss level of the surface.

TFL decorative panels have excellent scratch and wear resistance. They are widely used in laminate flooring, office furniture, closet system components, store fixtures and cabinets. It is also an appropriate spec in health care, hospitality, commercial and retail settings. TFL decorative panels typically require a decorative edge treatment and can be specified with or without edge, and with single or opposite-side face treatments. Due to the performance, design flexibility and cost advantages, TFL offers an excellent option for designers and specifiers.

TFL CONTINUED ON PAGE 62 ›

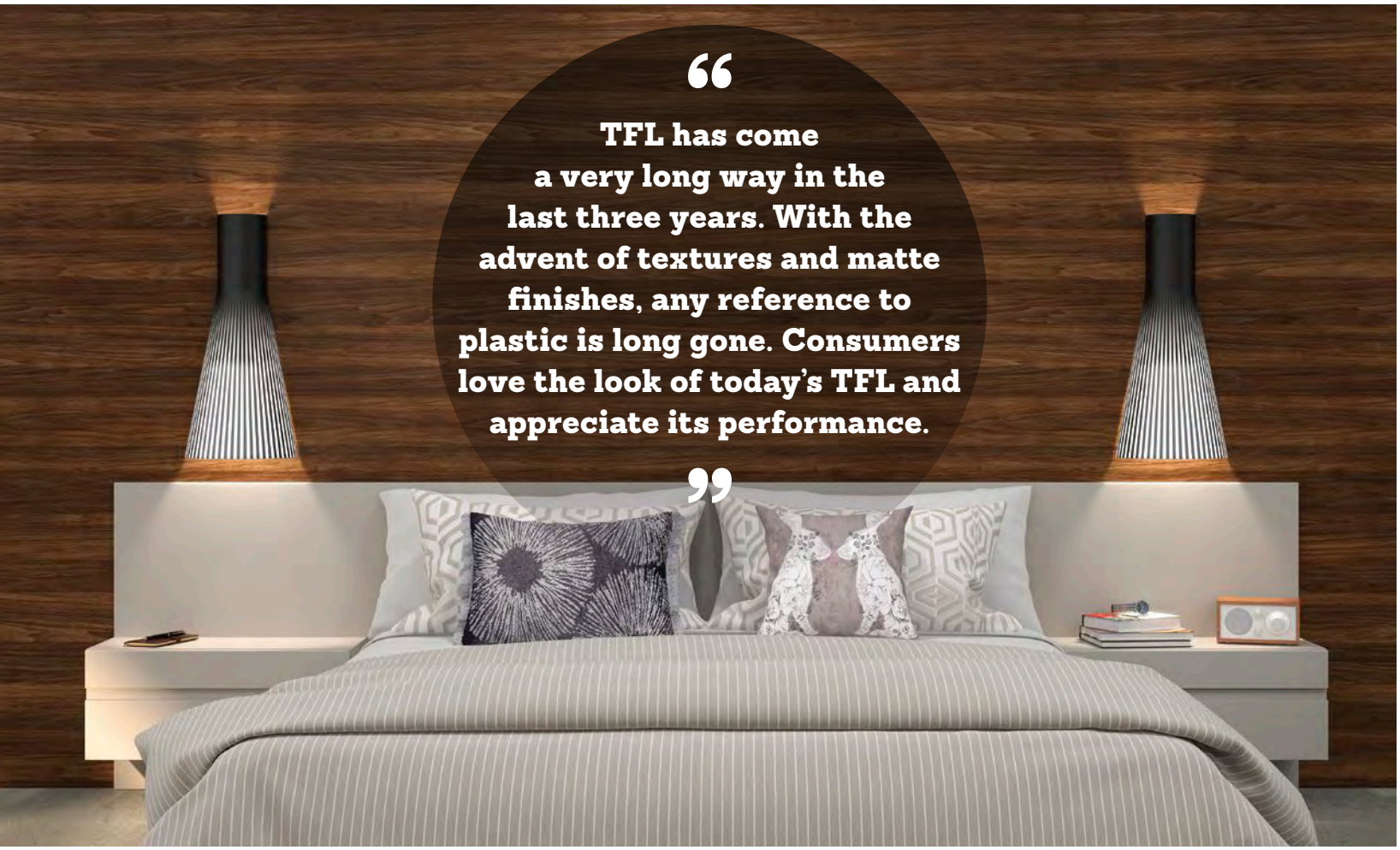


THERMALLY FUSED LAMINATE PROVIDES EXCELLENT HARDNESS AND SCRATCH RESISTANCE SUFFICIENTLY DURABLE FOR CABINETS, COUNTERTOPS AND SHELVING IN MODERN BATHROOMS ❶. TFL DECORATIVE PANELS ARE A STRIKING FEATURE ON THE WALLS IN THIS OFFICE RECEPTION AREA ❷. PRESS PLATES ARE DESIGNED TO CREATE REALISTIC PATTERNS AND TEXTURES FOR LAMINATED PRODUCTS ❸.

SYNCHRONIZED TEXTURES

WHAT IS IT, WHAT DOES IT MEAN TO ME?

Synchronized textures and finishes are defined as aligning pattern and texture in an effort to replicate a product as it exists in nature. Thermally fused laminate (TFL) producers work in harmony with décor print suppliers and press-plate designers to ensure the pattern (often woodgrain) and texture are perfectly aligned in each and every press cycle. The result is a laminated product with wood grain and texture perfectly matched and indistinguishable from real wood veneer. Synchronized textures are available as a two-sided product, providing a great deal of flexibility to designers and fabricators.



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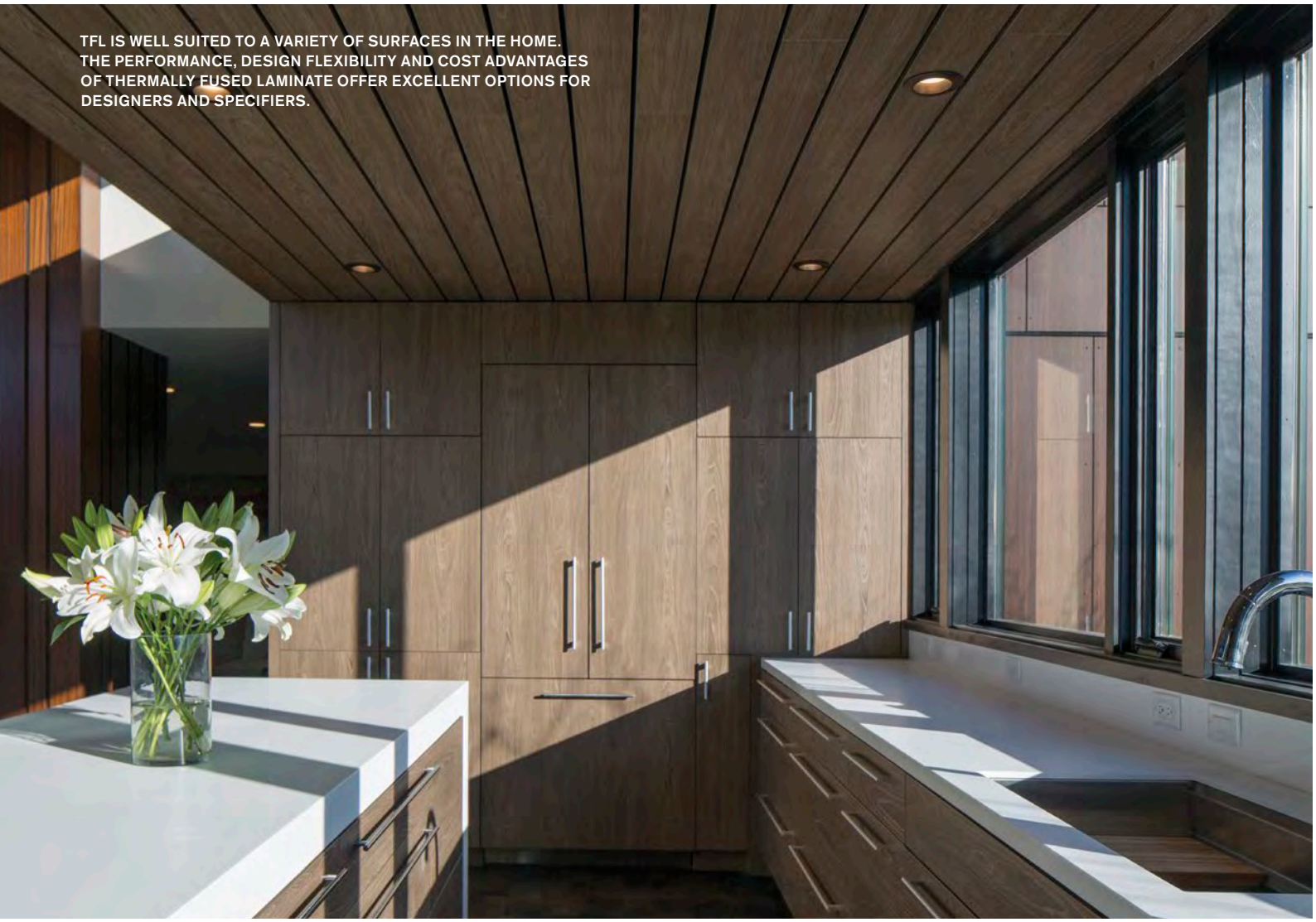

TFL IS WELL SUITED TO A VARIETY OF SURFACES IN THE HOME. THE PERFORMANCE, DESIGN FLEXIBILITY AND COST ADVANTAGES OF THERMALLY FUSED LAMINATE OFFER EXCELLENT OPTIONS FOR DESIGNERS AND SPECIFIERS.

‹ CONTINUED FROM PAGE 60

The two most common thermoset resin systems used in TFL decorative panels:

MELAMINE: The resin is introduced into the paper during an impregnating operation. After the paper is impregnated, it is partially cured (B stage) using curing ovens. The melamine resin is fully cured under heat and pressure during hot press lamination. The B staged paper has a definite shelf life that varies with temperature and humidity. Melamine resins are fully cured at 300-400 psi and 300-400 F. They are noted for their hardness, scratch resistance and color stability, and are the most commonly used resin in saturated paper overlays.

POLYESTER: The resin is introduced into the paper during an impregnating operation. After the paper is impregnated it is partially cured (B stage) using curing ovens. Polyester resin is fully cured at 175-200 psi and 275-350 F during hot press lamination. The B staged paper has a definite shelf life that varies with temperature and humidity. Polyester resins are noted for their chemical, stain, water and impact resistance, color clarity and machinability. ■

THERMALLY FUSED LAMINATE PROVIDES EXCELLENT HARDNESS AND SCRATCH RESISTANCE SUFFICIENTLY DURABLE FOR OFFICE FURNITURE.

Please see pages 101-106 for information about the companies that produce TFL.