Different at the Core:
Distinguishing Between Laminates and Veneers
Introduction

Sustainability and economics are at the forefront of the design and construction industry, prompting designers and specifiers to seek out fresh, smart ways to minimise their environmental impact while keeping within increasingly strict budgets. This has led many professionals to reassess the materials they use and opt for those that are cost-effective and perceived to have minimal negative repercussions on the environment, such as laminate and veneers. While the popularity of the two materials has grown significantly over the past few years, some confusion remains as to the difference between the two materials and the specific characteristics and benefits that each provide. The composition of laminate and veneer is vastly different, and each offers unique attributes. This whitepaper takes a close look at veneers and laminates to provide clarity on each product and examines how laminates in particular provide superior qualities that cater to the demands of contemporary construction.

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The Demands of Contemporary Design and Construction

Around the world, the construction sector is in a period of marked growth. Market forecaster Construction Intelligence Center reports that by 2020, the total value of the global construction industry will reach an unprecedented worth of $10.3 trillion. This growth is driving profit margins and competition to new highs, but the expansion of the industry is also presenting designers and specifiers with a range of new or elevated demands.

Specifically, there is a great demand for durability, cost-efficiency, versatility and minimal maintenance. When they are achieved, these attributes allow design professionals to provide dynamic, flexible projects that meet the long-term needs of the owner and occupant whilst maintaining aesthetics and achieving budget requirements. Against this backdrop, laminate and veneers have emerged as popular choices amongst designers and specifiers. However, it is important to note that despite being used for the same purpose, the attributes of materials – such as their properties, availability, lifecycle and cost – are different.
Laminates Versus Veneers: Understanding the Difference

The differences between these materials are due to their composition.

Veneer is an engineered timber product comprised of a thin slice – typically 0.6mm in thickness – of timber adhered to a backing sheet of MDF or other engineered substrate. It is often used to incorporate hardwood into a project for a lesser price than that of solid timber. As its surface layer is real timber it has the qualities of variation in colour, texture, and pattern; however, this also comes with many of the drawbacks of timber, albeit on a lesser scale. Such drawbacks include a tendency toward scratches and elevated maintenance requirements.

Laminate, on the other hand, is a composite with three key elements: a core of resin-impregnated Kraft paper, a decorative face paper material, and melamine resin-impregnated overlay. There are three types of laminate: high pressure (HPL) and compact, which have Kraft paper cores of varying thicknesses, and low pressure/melamine faced board (LPM), which does not have a core. HPL laminate is often used as the decorative surface for residential and commercial countertops and applications including cabinets, work surfaces, laboratory surfaces, backsplashes, partitions, retail fixtures and panel applications.

Lasting performance
Laminates are superior to veneers in many regards but particularly in terms of durability, allowing them to be utilised in areas where durability, impact and scratch resistance are important. The thick, shock absorbent core of HPL and compact laminates affords a high degree of impact resistance that outperforms veneer and makes them ideal for heavy use applications such as kitchen cabinets, wardrobes and bench tops. In commercial contexts, HPL and compact laminate are well suited to use as reception counters, lockers, workbenches, and other load bearing applications.

While the individual attributes of a product vary between suppliers, testing in accordance with NEMA/ISO 4586 for the market leaders has shown that in comparison with wood veneer, laminate has 10 to 12 times the wear performance. This is in addition to 4 to 5 times the impact resistance and 2 to 4 times the scratch resistance. The composition of laminate means that durability is inherent and does not require ongoing maintenance or application of a surface treatment/finish. Laminate is also resistant to fading and other damage caused by UV exposure, expanding its application options.

On the other hand, the unprotected surface of most veneers is prone to denting and scratching and susceptible to damage in the presence of water, making it unsuitable for heavy-duty use. This is coupled with a tendency for veneers to fade with UV exposure. While some products’ protective top coats may combat this, such coats require periodic reapplication that can be both time and cost intensive. Special care must also be taken while cleaning the surface to prevent damage, whereas laminate only needs to be vacuumed or wiped with a damp cloth. In addition, as each sheet is exclusive, once the sheet is damaged a similar replacement is not available, meaning the owner must either put up with the damage or variance in aesthetics or replace the entire area.

Cost effectiveness at all stages
Due to its high degree of durability, laminate offers cost effectiveness at all stages of a project’s life, from initial specification through to installation. Laminates are more affordable than veneers as they have a lower purchase price due to their materials being cheaper, and often last longer. The price of veneer varies greatly depending on the species of timber used, resulting in an added layer of complexity when specifying that compares unfavourably to the more consistent cost of laminate. Minimal maintenance requirements also equate to low – if any – operational costs post-installation, and ensure that laminate can perform at optimal levels for extended periods.

Versatility and breadth of design opportunities
The myth that wood grain laminates lack realism is outdated, with many products visibly indistinguishable from real wood, while providing superior performance. New, advanced photo imaging techniques allow leading manufacturers to produce hyper realistic face papers that are virtually indistinguishable from natural timber. The melamine overlay can also be imprinted with a purpose-built dye to emulate the distinctive feeling and surface qualities of timber.

In addition, laminate provides the flexibility to customise all elements of the surface from the species and texture to the gloss level, sheen and shade. Veneer, on the other hand, limits designers to the natural qualities of the species chosen and the desired effect may only be achieved using species that are expensive or otherwise unavailable. Even if the materials for the desired look are available, the ability to manufacture and stain the product consistently presents another challenge.

Flexibility is a question of not only aesthetics, but also application. Susceptibility to damage from moisture and UV exposure greatly limits the applications of veneers; this is limited to areas not prone to wear and tear, such as conference rooms and other low-traffic interiors. Veneer also cannot be used near windows or other areas exposed to direct light, nor is it suitable for areas prone to moisture such as kitchens, bathrooms, or laundries. In addition, the material’s low impact resistance makes it unsuitable for demanding, high traffic environments including healthcare and aged care facilities. This is a significant restriction for building professionals, especially given that the industry is predicted to continue its steady growth due to an ageing population, resulting in the expansion and construction of new facilities in Australia.
Wilsonart

For over 50 years, Wilsonart has led the global laminate market with a diverse catalogue of stylish, highly functional laminate surface solutions. Renowned for its focus on quality and innovation, Wilsonart has a presence in more than 100 countries worldwide and manufacturing facilities throughout North America, the United Kingdom, France, Germany, China, Thailand and Australia. Wilsonart products can be found around the world in homes, schools, offices, hospitals, retail stores, hotels, airports, and any space that requires a decorative surface solution. The Wilsonart portfolio ranges from affordable laminate panel solutions, compact laminate for high-wear areas, and the chemical-resistant Chemsurf for tough environments, through to marker board laminate and metal laminates that use fine metal finishes.

All Wilsonart laminates are extremely photorealistic and significantly outperform competing veneer products. NEMA/ISO 4586 test results have demonstrated that Wilsonart laminates have 12 times the wear performance and 5 times the impact resistance of veneers, in addition to outstanding resistance to fading when exposed to UV light. This is in addition to scuff resistance performance up to three times that of comparable veneers.

Wilsonart products provide stunningly realistic finishes that include the sought-after classic species such as Oak, Walnut, Maple, Teak and Cherry. This wide variety is complemented by realistic finishes including Xtreme Matt and fingerprint-resistant technology (Traceless), which ensures that smears, smudges, and streaks are almost never seen. Xtreme Matt caters to the trend of bringing natural elements inside, allowing designers to provide a seamless transition between the inside and the outside. Wilsonart offers an extensive collection of woodgrain laminate designs, ensuring architects have no difficulty finding the ideal woodgrain for their project.

Wilsonart has a strong focus on sustainability, and several years ago became the first company in the industry to reshape its entire supply chain for its paper source, which makes up 70% of its High Pressure Laminate (HPL) product lines. Wilsonart has since received Independent SCS certification of a minimum 20% post-consumer recycled content for its laminate ranges. The brand was also the first adhesive manufacturer to have its low-emitting PVA and woodworking adhesives recognised by UL's GREENGUARD Certification Program for indoor air quality. The company has since received industry certifications and compliance recognition from the Forest Stewardship Council and NSF International, The Public Health and Safety Company.

To find out more about Wilsonart's extensive product range, visit www.wilsonart.com.au.
REFERENCES


5. https://kitchencabinetkings.com/glossary/veneer/


