

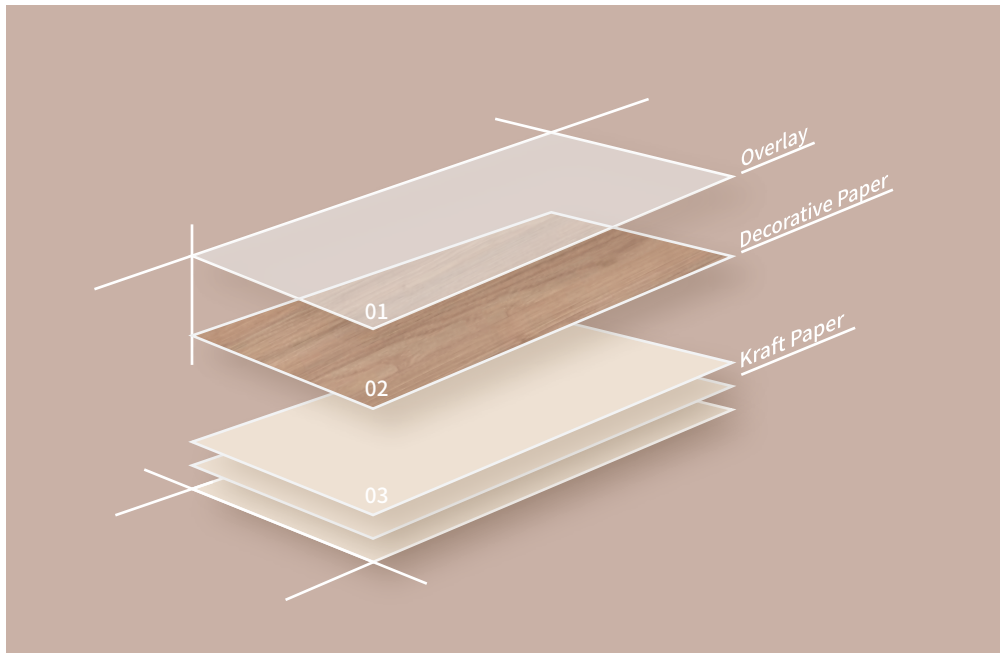
Technical Data Sheet

High Pressure Decorative Laminate

0.7mm (0.028" inch) thickness

1.0mm (0.039" inch) thickness

PoliLam HPL Composition



Overlay Film: a highly transparent paper which makes the surface of the laminate abrasion and scratch resistance.

Decorative Paper: a colored or patterned paper that gives the laminate its aesthetic appeal, impregnated with melamine resin.

Kraft Paper: the core of the laminate. It is usually a light brown color, forms the basis of the HPL, and is impregnated with phenolic resin.

Maintenance of HPL

HPL does not require any special maintenance. For the most part a moist towel or normal household products will get the job done. In order to not damage your HPL surfaces, avoid using abrasive cleaners or materials.

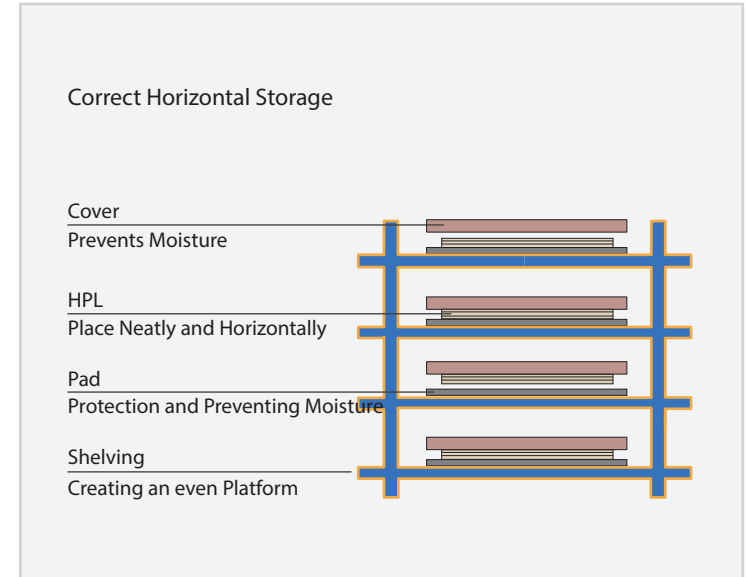
For difficult stains please refer to the chart below.

Coffee, Wine, Ink	Sponge with Water
Cooking Residue, Eggs, Dry Blood or Wine	Sponge with cold water and soap or mild detergent
Glue, Gum, Smoke, Gelatine	Sponge with hot water and soap or mild detergent
Hair Spray, Make-up, Nail Polish	Alcohol or Acetone with a cotton cloth
Oil Paint	Trilene Nitre Based Solvents
Limescale Deposits	Detergent with less than 10% citric/acetic acid

Care Guide:

PoliLam High Pressure Decorative Laminates are durable, impact, and abrasion resistant under common use. However, to ensure the longest life and care of your laminates:

1. Do not use sharp objects on the laminate surface.
2. Do not cut, slice, or pound directly on the laminate.
3. To avoid HPL separation from the substrate do not expose to temperatures over 60 C (140 F) for long periods of time.
4. Although HPL is waterproof, avoid wetting the joints as they may affect your substrate and cause it to swell.



01 | Transporting

Safety first! Handling of HPL sheets should be done with care to avoid any damage. When loading and unloading sheets, they should be lifted carefully and not slid on top of each other. Smaller sheets can be handled by one person, but ensure the decorative side of the laminate is facing towards the body of the carrier.

Handling of large HPL sheets always requires two people one on each side. To avoid damage while transporting, be careful to protect the corners of the

02 | Packaging

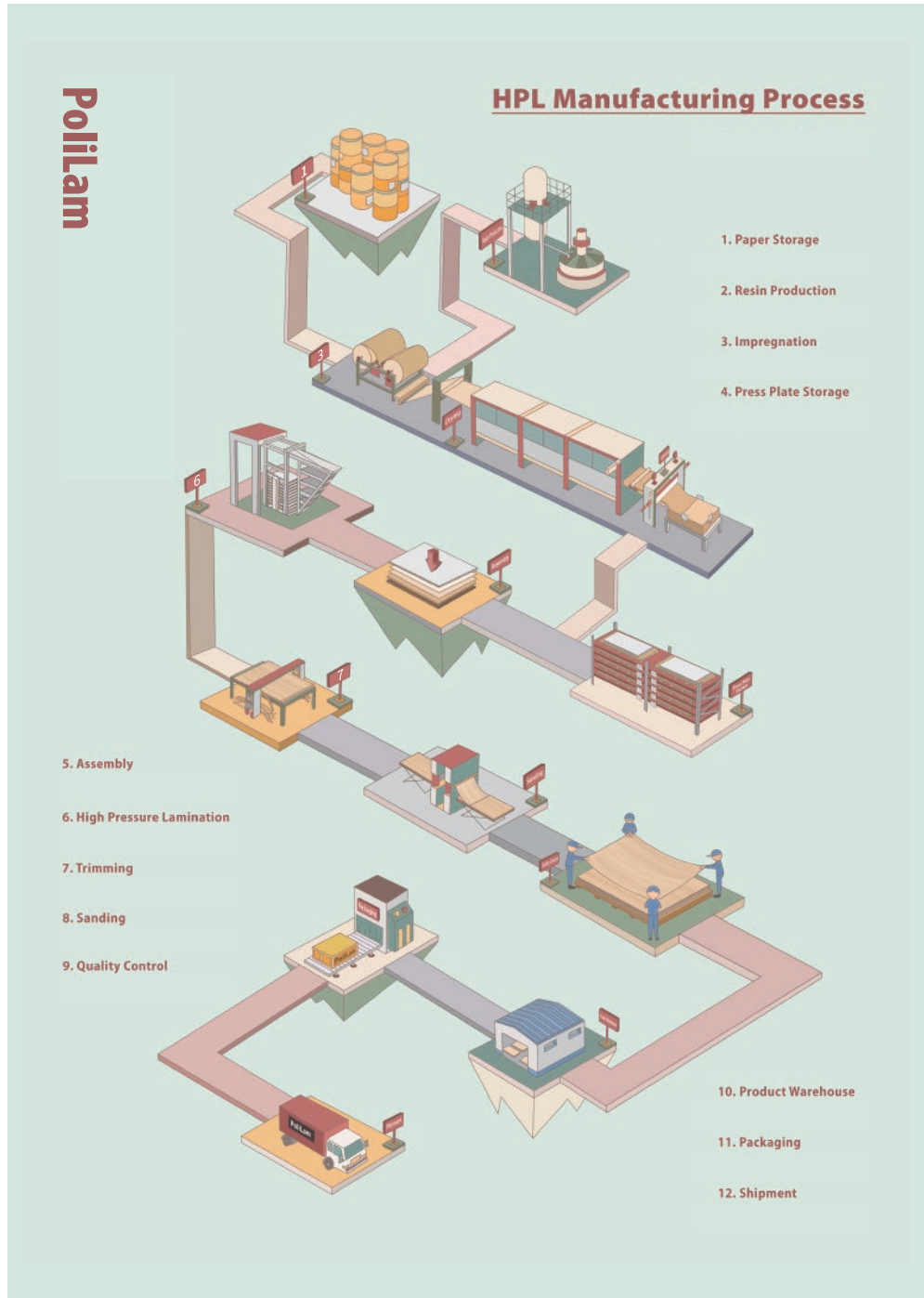
When packaging 25 sheets or fewer, they can be rolled. Before transporting, be sure to roll up the HPL with the decorative side facing inwards and secure with durable twine on both ends of the roll. Be cautious when carrying the packaged rolls, and do not place any heavy objects directly on top of the roll. The rolled-up sheets can be placed in a wooden crate for additional protection during transportation.

When packaging 25 sheets or more, flat crate packaging is recommended. The crate packaging should then be transported using a forklift.

03 | Storing

HPL Sheets should be stored in a cool, dry room away from direct sunlight. They should not touch the wall or the floor, and they must be kept in an enclosed area with a temperature between 10 and 36°C (50 and 96.8°F) and humidity between 60–65%. HPL should be placed neatly and horizontally on a shelf or pallet with cover and backing plates underneath. This ensures the HPL is displaced evenly and protects it against moisture. If planning to store for an extended period, wrap with straps to prevent warping.

If horizontal storage is not possible, the sheets can be placed in piles at a 60–70° angle, resting against a rigid support along with a slip-prevention device. The sheets must not touch the wall or floor.



High pressure decorative laminate is manufactured by pressing melamine impregnated décor paper over a phenolic impregnated kraft paper core at pressures over 1000 psi and temperatures of approximately 150 degrees Celsius, for a long cycle of approximately 90 minutes, the layers of sheets make up the thickness desired and are placed between texture press plates to create the haptics of the surface design. An overlay film is used above the decorative melamine impregnated paper to create additional scratch and wear resistance. The backs are sanded in order to create an easy bond to a substrate.

Technical Characteristics

Properties of PoliLam Decorative Laminates

Aesthetic Design	Easy to Install
Flexibility	Easy to Clean
Durability	Fire Resistant
Water Resistant	Environmentally Friendly
Hygienic Properties	Enhanced Texture Haptics
Antistatic	Matching Edge Banding

Design

Designs ranging from solid colors, woodgrains, marble, patterns, fabric, leather, we have over 200 designs to choose from.

Textures

AS Ace Supreme –an extremely matt surface with high scratch resistance, thermal healing properties, and fingerprint resistance

AP Ace Premium –an extremely matt, soft touch texture, with scratch resistance qualities and fingerprint resistance.

IV-matt and gloss natural and modern woodgrain embossed design

VF –a Veneer Finish design woodgrains encapsulating a real veneer for a large range of our woodgrains.

HD –Horizontal Direction, horizontal streaks and textured ridges.

RW –a Real Wood embossed look, ridged and deep crevices, mainly matt, with low gloss levels.

LA –our semi, dry matte design that enhances the look of complex and our solid color designs.

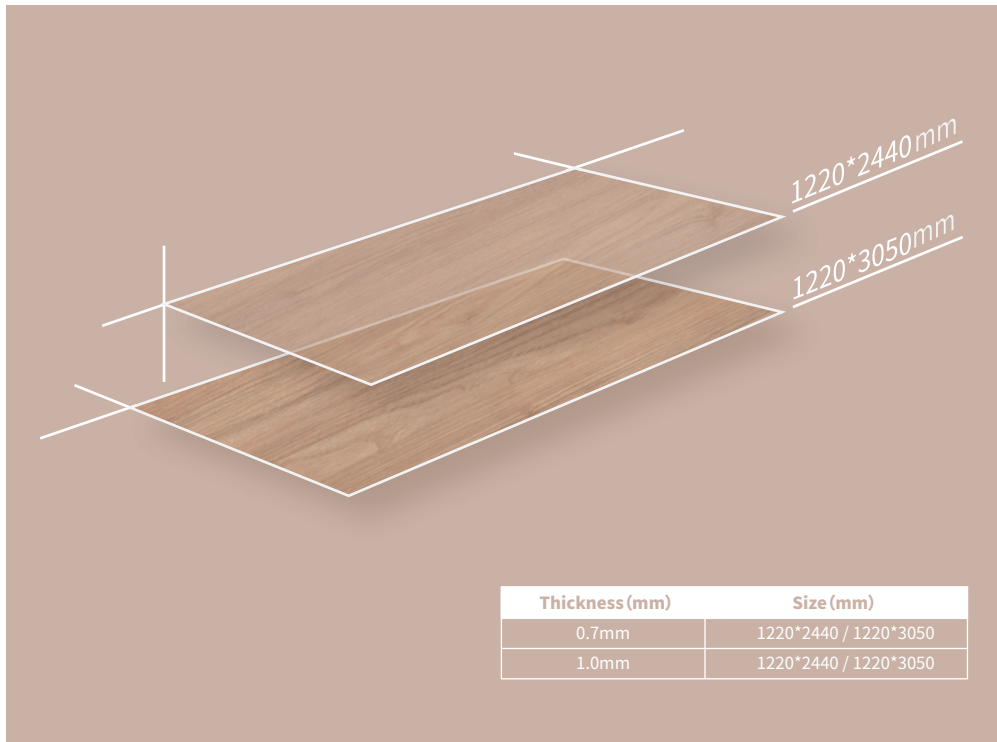
DW –our Deep Wood embossed texture with continuous vertical streaks and brushes, mimicking that of real, extremely textured wood grains.

PoliLam

Textures

- PS** –Pebble Stone texture finish, mainly matte with slight reflective glosses, extremely bumpy and surfaced.
- CO**–Colorado Stone widely used in our stone and pattern designs for its protruding stone look and feel.
- FM**—Fabric Material, the texture embossment mimics that of real fabrics.
- HG**—A High Gloss finish, recommended for vertical applications.
- MT** –Matt, silky soft surface.
- RT** –Rustic Texture, a synchronized texture for our Veraco collection, whose texture aligns with the design of the pattern.
- SU**—a rough and course texture, used especially for concrete and stone patterns. A mix of matte and gloss levels, creating natural textures found in real stone and marble.
- SY** –Subtle stone, small, bumpy textures creating a rough and gravelly feel.
- LZ** –Full grain leather, mimicking soft, real leather.
- LP** –a distressed leather look
- A**—a standard finish, with low gloss levels, and an overall light matt look. Up close you'll notice its pores, but when implemented to the design it's an overall smooth and light finish.

Standard Dimensions

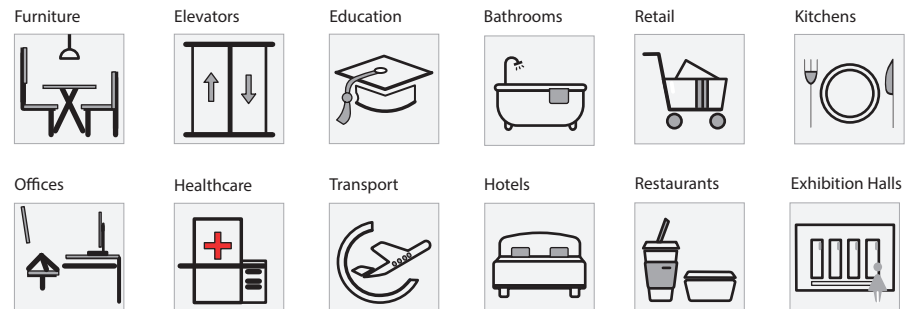
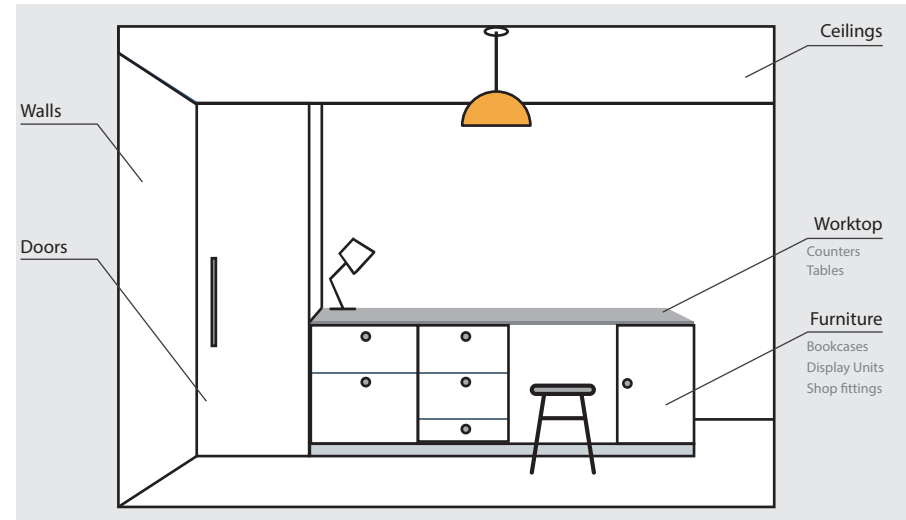


1) **Antibacterial Properties:** can be applied to all of our laminates, MOQ required. Ace Supreme and Ace Premium automatically include antibacterial properties.

Test Organism:	Staphylococcus aureus ATCC 6538P
	Escherichia coli ATCC 8739
	Klebsiella pneumoniae ATCC 4352
	Salmonella ATCC 14028

2) **Postforming Grade:** can be applied to all of our laminates, MOQ required. 0.6 mm postforming laminate will postform to a 7 – 9 mm radius at a nominal surface temperature range of 325 degrees F to 340 degrees F with a time of 25 to 30 seconds.

Basic Uses:



PoliLam

Fabrication and Assembly

Particle Board



High-Density Fiberboard



Plywood Panels

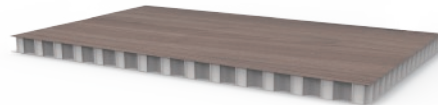


Metal Substrates

(Need to apply PUR or Epoxy Glue on the HPL in advance)



Honeycomb Structure Substrates



Mineral-Based Substrates

(Concrete, Calcium Silicate, Vermiculite Panels)



PVC



Note: We have matching edge banding.



NOT RECOMMENDED FOR APPLYING

01. Plaster or Concrete Surfaces
02. Wallpaper Surfaces
03. Solid Wood

Backer sheets: are recommended on the back of the panel to protect the substrate from humidity and avoid warping, using the same thickness backer is recommended.

TECHNICAL DATA

PoliLam high pressure decorative 0.7 mm laminate is manufactured to conform to the requirements of ANSI/NEMA Standard LD-3-2005 Standard for High Pressure Decorative Laminates.

Physical Properties of Horizontal Laminates

Product Characteristics: HPL 0.7mm

TEST ITEM	Test Method	Result	Conclusion
Cleanability	ANSI NEMA LD 3-2005 Section 3.4	6	Pass
Stain Resistance	ANSI NEMA LD 3-2005 Section 3.4	Stain 1-10: NE, No effect Stain 11-15: M, Moderate effect	Pass
Boiling Water Resistance	ANSI NEMA LD 3-2005 Section 3.5	Rating, Min.: NE, No effect	Pass
High Temperature Resistance	ANSI NEMA LD 3-2005 Section 3.6 Hot Wax method	No effect Rating, Min.: Slight Effect	Pass
Scratch Resistance	ANSI NEMA LD 3-2005 Section 3.7.3	Rating 3 2N-4N	No requirement
Ball Impact Resistance	ANSI NEMA LD 3-2005 Section 3.8	1100mm (500mm NEMA minimum requirement)	Pass
Wear Resistance	ANSI NEMA LD 3-2005 Section 3.13	1200 cycles (400 cycles NEMA minimum requirement)	Pass
Tensile Strength	ASTM D638-15	104 MPa	No requirement

*for full test report please visit www.polilam.com/certifications

Physical Properties of Horizontal Laminates

Product Characteristics: HPL 1.0mm Ace Supreme

TEST ITEM	Test Method	Result
Resistance to Abrasion	EN 438-2:2016 + A1: 2018 Clause 10	600 (rounds)
Resistance to Immersion in Boiling Water	EN 438-2:2016 + A1: 2018 Clause 12	Rating 5: No visible change
Resistance to Water Vapor	EN 438-2:2016 + A1: 2018 Clause 14	Rating 5: No visible change
Resistance to Dry Heat	EN 438-2:2016 + A1: 2018 Clause 16	Rating 5: No change
Resistance to Wet Heat	EN 438-2:2016 + A1: 2018 Clause 18	Rating 5: No change
Resistant to Impact by Large Diameter Ball	EN 438-2:2016 + A1: 2018 Clause 21	2200mm, No cracking
Resistance to Cracking under Stress	EN 438-2:2016 + A1: 2018 Clause 23	Rating 5: No evidence of cracking
Scratch Resistance	EN 438-2:2016 + A1: 2018 Clause 25	Rating 4: 4N-6N
Resistance to Staining	EN 438-2:2016 + A1: 2018 Clause 25	Rating 5: No change
Resistance to Artificial Weathering	EN 438-2:2016 + A1: 2018 Clause 29	Appearance rating 5: According to EN 438-2:2016 section 29.5.3, rating 5 is the best and rating 1 is the worst.
Resistance to Impact by Small-Diameter Ball	EN 438-2: 2016 + A1: Clause 20	Max resistance to impact force: 44N

PoliLam

Fire Test Data

Test data is in compliance with CAN/ULC S102-18, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies as well as in accordance with ASTM E84-20 Standard Test Method for Surface Burning Characteristics of Building Materials, as well as in accordance with AS 5637.1-2015 and EN 45545-2:2013+A1:2015 Railway applications—Fire protection on railway vehicles.

Product Type	Test Condition	Test Condition and Results	Test Condition and Results
HPL Laminate 0.7mm Thickness	ASTM E84-20	Flame Spread / Flame Spread Index 0 / 0	Smoke Developed / Smoke Developed Index 129/130
HPL Laminate 0.7mm Thickness	CAN/ULC S102-18	Flame Spread / Flame Spread Index 0/0	Smoke Developed / Smoke Developed Index 52/50
HPL Laminate 0.7mm Thickness	EN 45545-2:2013+A1:2015	T02 ISO 5658-2:2006 Lateral flame spread: 20min (specified in EN 45545-2:2013+A1:2015 T03.01)	ISO 5660-1:2015 Reaction-to-fire tests
HPL Laminate 0.7mm Thickness	AS 5637.1-2015	AS/NZS 3837-1998 Product Group Number Classification : 1	Average Specific Extinction Area: 42.7 m ² /kg

*for full test reports please visit www.polilam.com/certifications

General Use & Warranty

PoliLam® laminates are manufactured to create a durable and aesthetically pleasing high pressure laminate products. Our laminates are durable, abrasion and impact resistant, as long as conditioned under normal use. When our laminates are used as recommend and with appropriate care, they will last throughout the years. With the proper care they are easy to maintain.

Please note:

- Cleaning of the laminate should be done with water and a clean, non-abrasive cloth.
- For stubborn stains, use mild household reagents, cleaners, or detergents, and gently wipe with a nonabrasive cloth.
- AVOID the use of abrasive liquid cleansers, bleaching compounds or solutions as they could damage the surface of the laminate.
- DO NOT place hot cookware directly on the laminate.
- Extended exposure to temperatures above 140 degrees Fahrenheit can lead to damage of the laminate surface and cause the laminate to separate from its substrate.
- DO NOT use the laminate for purposes it is not intended for.
- DO NOT iron, slice, chop, hammer or expose the laminate to open flames.
- DO NOT use sharp objects on the laminate surface.
- Outdoor application is not recommended. Exposure to direct sunlight and weather conditions are not recommended and UV rays may alter the color of the laminate.
- High Gloss (HG) surfaces as well as those laminate designs marked for vertical use in our catalogue are recommended ONLY for vertical applications.

PoliLam® Laminates conform to internationally recognized technical standards and have a thickness tolerance of +/-10%. Limited Warranty PoliLam warrants that within three years (from time of sale), our products are reasonably free of defects and when handled and fabricated properly will comply, within reasonable deviations, to applicable manufacturing specifications. In the events that manufacturing defects occur within the warranty period, our liability is limited to the replacement of the defective sheets or the reimbursement of the cost of the sheet(s) ONLY.

PoliLam's warranty will NOT cover defects and non-compliance arising from and/or otherwise attributable to any other causes, including, but not limited to the:

- Improper installation of the products
- Improper handling, transportation, or storage of product
- Improper or unintended usage of the product
- Lack of proper maintenance to the product
- Exposure of the product to extreme temperature
- Unauthorized alteration to the product
- Outdoor application Clients are advised and expected to inspect products thoroughly upon arrival and prior to installation.

We warrant only the original buyer.

All laminates are to be inspected prior to lamination to ensure they are sound, clean, and free of surface defects. Protective peel coat should be removed prior to inspection. Imperfections found on coated products after fabrication may not be protected by any warranty.

High-pressure decorative laminates and substrates should be allowed to acclimate for at least 48 hours at the same ambient conditions. Optimum conditions are approximately 23 degrees C (73 degrees F) and a relative humidity of 45% to 55%.

To avoid stress cracking, do not use square-cut inside corners. All cutouts should be routed or filed to ensure smooth edges. A radius of 3.175 mm (1/8") or larger in the corners is recommended to minimize stress cracking.

Drill oversize holes (at least 0.05 mm or 0.002" larger in diameter) for screws and bolts.

Material, equipment, and workmanship should conform to industry standard practices, conditions, procedures, and recommendations as specified by ANSI/NEMA LD-3-2000 Standard for High Pressure Decorative Laminates.