

## PRODUCT DATA SHEET

APRIL 2014

### PEARLESCENCE® HIGH PRESSURE DECORATIVE LAMINATE

#### PRODUCT DESCRIPTION

Pearlescence® high-pressure decorative laminates are a series of solid color, prints, which feature inks with pearlescent particles to create a dramatic visual effect when exposed to light.

To achieve their unique visual impact, Pearlescence laminates are manufactured with a reduced amount of melamine resin. This allows for the maximum amount of ambient light to reflect and refract from the surface, enhancing its unique luster and visual appeal. The amount of melamine resin gives laminates their wear, abrasion and scratch resistance. As a result of reduced melamine resin content, Pearlescence laminates (with the exception of those specified in Catalyst® finish) do not achieve NEMA standards for abrasion resistance. The NEMA standard is 400 revolutions on a Taber Abrader; Pearlescence laminates achieve 100-300 cycles. Therefore, Pearlescence laminates are not recommended for high-wear horizontal applications in all finishes.

#### RECOMMENDED APPLICATIONS

Pearlescence® laminate panels in the Textured, Chrysalis, Crisscross, Gloss, Catalyst and Corrugated finishes should only be specified for vertical and/or nonworking horizontal surfaces exposed to minimal wear. Typical vertical applications can include wall paneling, interior doors, elevator cab interiors, cabinetry, casino slot bases, and bar fronts.

Lamin-Art® Pearlescence products may also be specified with **Oyster Shield High-Wear Protection™** in the Textured, Catalyst, or Gloss finish. Typical horizontal applications include contract furniture and casework, as well as store fixtures. This exclusive surface enhancement provides these products with the same abrasion resistance properties as Lamin-Art general purpose high-pressure decorative laminates for specification on horizontal applications and high-wear surfaces. **Lamin-Art brand high-pressure decorative laminate is for interior use only and is not recommended for direct application to plywood, steel, aluminum, fiber reinforced plastic, plaster, gypsum board or concrete. Do not use in areas exposed to temperatures in excess of 275°F (135°C) or high humidity.**

#### PRODUCT COMPOSITION

Pearlescence® high-pressure decorative laminates are manufactured by laminating phenolic resin-impregnated kraft sheets with melamine resin-impregnated decorative sheets. In order to maximize the interaction of light with the embedded pearlescent inks in the decorative sheet, Pearlescence laminates are treated with less melamine resin than Lamin-Art® general purpose high-pressure decorative laminates. The lamination is performed under a minimum pressure of 1,000 psi (2,068 kPa) at a temperature of approximately 300°F (149°C).

#### CONDITIONING

Pearlescence® high-pressure decorative laminate may be sensitive to changes in temperature and humidity conditions. If adhered with excess moisture present, there is a risk of cracking and open seams due to shrinkage, particularly in winter conditions or when relative humidity is low. Prior to adhesive application to a suitable substrate, Pearlescence panels should be carefully conditioned. (The recommended method of conditioning is to store panels and substrates together in the same room for a period of at least 72 hours with adequate air movement, under stable temperature and humidity conditions as close as possible to actual conditions at the installation site.) **Recommended conditioning for all panels is at approximately 75° F (24° C), with 45-55% relative humidity.**

#### STORAGE AND HANDLING

Pearlescence® high-pressure decorative laminate sheets should be stored horizontally, back-to-back and face-to-face, with the top sheet turned face down and a caul board placed on top to preserve the material. Storing the panels in an atmospherically stabilized room is recommended to avoid extreme fluctuations of moisture.

Lamin-Art® recommends that full-sized sheets be carried by two people with the decorative facing upward whenever possible.

#### INSTALLATION

All surfaces to be laminated should be inspected prior to installation to ensure that they are clean and free of surface defects. If applicable the protective coating (peel coat) should be removed prior to inspection. All defects should be corrected before application. Material, equipment, and workmanship should conform to industry-standard practices, conditions, procedures, and recommendations specified by National Electrical Manufacturers Association (NEMA) LD 3-2005 Annex A, Architectural Woodworking Institute (AWI) Quality Standards, and the American National Standards Institute (ANSI) 161.2-1979 standards.

## SUBSTRATES

Laminate should be adhesively bonded to a substrate at the application site, or to a sheet substrate forming a new composite component which will be used in other assemblies. Suitable substrates may include but are not limited to particleboard (minimum density 45 pounds/cubic foot), medium-density fiberboard (MDF) or high density fiberboard (HDF). Materials with insufficient dimensional stability or internal bond strength such as plywood, steel, aluminum, fiber reinforced plastic, plaster, gypsum board, and similar materials are not recommended for use as substrates. Concrete is not a recommended substrate.

## ADHESIVES

Surfaces to be adhered must be sound, thoroughly dry, clean, free of dust, wood chips, oil and other types of surface contamination. When a laminating press is not available, such as an on-site installation, contact adhesives may be used, however this method should be restricted to small areas only. Ensure full adhesive coverage of both surfaces to be bonded and apply a pressure of at least 50-75 pounds per square inch until full bonding is achieved. Spot bonding should never be used. In all cases with all types of adhesives comply with the adhesive manufacturer's usage recommendations.

## BACKING SHEETS

To avoid warping of a panel assembly faced with Lamin-Art® general purpose high pressure laminates, stresses resulting from thermal and hygroscopic forces on both sides of the assembly must be balanced. The best results are obtained when a backing sheet, with characteristics comparable to the face sheet, is laminated to it. Alternatively, balance may be achieved using an ordinary high pressure laminate of the same thickness on the back side of the assembly. Narrow panels for wall applications, held rigidly in place by a securing system can have just a face side if the back side is protected from excess humidity and covered with a suitable sealant such as paint, lacquer, or a vapor-retarding varnish.

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## MAINTENANCE

Pearlescence® high-pressure decorative laminate may be cleaned with a damp cloth, warm water, and a mild soap or household cleaning products. Cleansers that contain abrasives, acids, or alkalis may damage the decorative surface and are not recommended. Stubborn stains may require the use of hypochlorite bleach followed by a clean water rinse.

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## WARRANTY

Lamin-Art®, Inc. expressly warrants that its products are free of defects in material and workmanship, are of merchantable quality, and meet or exceed performance standards for high-pressure decorative laminates as established by NEMA, LD 3-2005. Please note that some of our products contain special pearlescent inks and do not meet NEMA standards for abrasion/scratch resistance in all finishes. Inasmuch as Lamin-Art has no control over the end products fabricated with the materials sold, no warranty or guarantee is expressed or implied, other than those set forth above, and is limited to the replacement cost of the material alone.

Questions? Call Customer Service at 800.323.7624.

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## SPECIFICATIONS

SIZES	
48" X 96"	THESE ARE THE NOMINAL DIMENSIONS OF REGULARLY STOCKED ITEMS. OTHER SIZES MAY BE AVAILABLE UPON REQUEST.
48" X 120"	
FINISHES	
<b>CATALYST™ (B)</b>	A GENTLY-ETCHED DIMENSIONAL FINISH CHARACTERIZED BY RANDOM SPIRALS REMINISCENT OF BURNISHED METAL (LRV 18.0).
<b>CHRYSLIS® (A)</b>	A GENTLY-ETCHED PATTERN WHICH CREATES A BRILLIANCE AND TEXTURE SIMILAR TO THAT OF BRUSHED METAL (LRV 10.0). RECOMMENDED FOR VERTICAL / LOW-WEAR APPLICATIONS ONLY.
<b>CORRUGATED (C)</b>	A DIMENSIONAL SURFACE OF ALTERNATING FURROWS AND RIDGES RUNNING LENGTHWISE ALONG THE SHEET, FEATURING A SOFT FINISH WITH LOW REFLECTIVE PROPERTIES (LRV 3.0). RECOMMENDED FOR VERTICAL / LIGHT-DUTY APPLICATIONS ONLY.
<b>CRISSCROSS (L)</b>	A SUBTLE TACTILE GRID OF FINE INTERSECTING LINES RUNNING LENGTHWISE AND WIDTHWISE ALONG THE SHEET (LRV15.0). RECOMMENDED FOR VERTICAL / LOW-WEAR APPLICATIONS ONLY.
<b>GLOSS (G)</b>	A SMOOTH MIRROR-LIKE FINISH SUITABLE FOR APPLICATIONS WHERE HIGH REFLECTIVITY IS DESIRED (LRV 100.00).
<b>TEXTURED (T)</b>	A NON-DIRECTIONAL MATTE FINISH WITH MODERATE REFLECTIVE QUALITIES (LRV 10.0). MAY BE SPECIFIED WITH OYSTER SHIELD HIGH-WEAR PROTECTION™ FOR HORIZONTAL AND/OR HIGH-WEAR APPLICATIONS.
<b>SUPERMATTE (SM)</b>	A SOFT TEXTURED SURFACE WITH LOW REFLECTIVE PROPERTIES (LRV 2.0).
<b>VELVA-TEX (VT)</b>	A SOFT FINISH SIMILAR TO HAND-RUBBED OILED HARDWOOD (LRV 16.0).
GRADES	
STANDARD GRADE <b>GP48 HSG (.048"/1.2 MM)</b>	THE MOST COMMONLY USED. RECOMMENDED FOR HORIZONTAL AND VERTICAL APPLICATIONS WHERE MAXIMUM IMPACT-RESISTANCE AND DURABILITY ARE REQUIRED. STANDARD GRADE GP48 MATERIAL CAN BE COLD BENT TO A RADIUS NO SMALLER THAN 12" (304.8 MM). WE DO NOT RECOMMEND USING HEAT TO FORM PEARLESCENCE® ITEMS TO A SMALLER RADIUS.
VERTICAL GRADE <b>GP28 VSG (.028"/0.7 MM)</b>	SUITABLE FOR APPLICATIONS WHERE THE ECONOMIES OF A THINNER MATERIAL ARE DESIRABLE AND IMPACT-RESISTANCE IS NOT CRITICAL. OFFERS THE SAME SURFACE DURABILITY AS THICKER GRADES. VERTICAL GRADE GP28 MATERIAL CAN BE COLD BENT TO A RADIUS NO SMALLER THAN 7" (177.8 MM). WE DO NOT RECOMMEND USING HEAT TO FORM PEARLESCENCE® ITEMS TO A SMALLER RADIUS.

## WHAT IS OYSTER SHIELD HIGH-WEAR PROTECTION?

Using an exclusive manufacturing process, our Oyster Shield High-Wear Protection™ increases the surface abrasion resistance without sacrificing their beauty. It's available on select Pearlescence® laminates. The result: Pearlescence laminates with Oyster Shield High-Wear Protection are suitable for both horizontal and vertical surfaces. Please note that, according to the NEMA manual: "The scratch resistance of HPDL is influenced by lightness and gloss. Lighter colors and textured surfaces are perceived to be more scratch resistant than darker, smoother colors. Therefore, the choice of color and finish should be made to suit the particular application for which it is intended."

## SPECIFYING PEARLESCENCE WITH OYSTER SHIELD HIGH-WEAR PROTECTION™

When selecting a Pearlescence® laminate for a high-wear horizontal surface (such as a restaurant workstation, retail cash wrap, or office furniture), we recommend you specify the laminate with Oyster Shield High-Wear Protection.™ To indicate this option on your specification documents, add "-OS" after the pattern number (ex: 2405-OS Frost Green). There is no additional upcharge for this feature.

Please note: Oyster Shield High-Wear Protection is not available for all Pearlescence patterns; look for the O on our Stock List or online at [www.laminart.com](http://www.laminart.com) to identify the patterns that offer it as an option.

## DESIGN TIPS

For installations with both vertical and horizontal surfaces, we recommend specifying our regular Pearlescence® product for the vertical surface and a matching or corresponding pattern with Oyster Shield High-Wear Protection™ for the horizontal surface. This allows you to maximize the visual impact of your design while providing the durability you need.

## PERFORMANCE

Pearlescence® products have been subjected to testing by independent, nationally recognized laboratories in accordance with National Electrical Manufacturers Association (NEMA) standardized testing procedures (Pub. LD 3-2005, Section 2). The following test results were obtained.

		TEST RESULTS FOR LAMIN-ART PEARLESCENCE HPL		
NEMA TEST PUB LD3-2005, SECTION 2	NEMA STANDARD	TEXTURED, VELVA-TEX, GLOSS, CHRYSLAIS®, CRISSCROSS,	CATALYST®	TEXTURED, VELVA-TEX, GLOSS WITH OYSTER SHIELD
<b>LIGHT RESISTANCE</b>	SLIGHT EFFECT	SLIGHT EFFECT	SLIGHT EFFECT	SLIGHT EFFECT
<b>CLEANABILITY (CYCLES)</b>	20 MAX.	7	20 MAX.	7
<b>STAIN RESISTANCE</b> REAGENTS 1-10 REAGENTS 11-15	NO EFFECT SLIGHT EFFECT	NO EFFECT NO EFFECT	NO EFFECT NO EFFECT	NO EFFECT NO EFFECT
<b>BOILING WATER RESISTANCE</b>	NO EFFECT	NO EFFECT	NO EFFECT	NO EFFECT
<b>HIGH TEMPERATURE RESISTANCE</b>	SLIGHT EFFECT	SLIGHT EFFECT	SLIGHT EFFECT	SLIGHT EFFECT
<b>BALL / DART IMPACT RESISTANCE</b> STANDARD GRADE	50" (1270 MM) 20" (500 MM)	50" (1270 MM) 20" (500 MM)	50" (1270 MM) 20" (500 MM)	50" (1270 MM) 20" (500 MM)
VERTICAL GRADE	20" (500 MM) 8" (200 MM)	20" (500 MM) 8" (200 MM)	20" (500 MM) 8" (200 MM)	20" (500 MM) 8" (200 MM)
<b>DIMENSIONAL STABILITY</b> STANDARD GRADE MACHINE DIRECTION CROSS DIRECTION VERTICAL GRADE MACHINE DIRECTION CROSS DIRECTION	.5% MAX. .9% MAX. .7% MAX. 1.2% MAX.	.33% .9% .7% 1.2%	.33% .9% .7% 1.2%	.33% .9% .7% 1.2%
<b>WEAR RESISTANCE (CYCLES)</b>	400 (MIN.)	100-300	> 400	>400