TECHNICAL DATA Wilsonart® Virtual Design Library Laminate (VDL)



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1. Manufacturer

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2. Product Description

Recommended Uses

Wilsonart® VDL is suitable for use on fine quality residential and contract furniture, fixtures and casework, and also for architectural application on columns, wainscoting, valances, cornices, interior doors and divider systems.

- Vertical Surface (VGP) Type 362 and 367 is the usual choice to surface cabinet walls, doors and drawer panels. It often appears on the vertical surfaces of desks, restaurants booths and maitre d' stations, and as architectural cladding. Type 362 and 367 is intended for vertical applications where a functional, durable, decorative surface must absorb somewhat less impact than a comparable horizontal surface. VGP surfaces may be postformed to achieve radiused edges.
- Postforming (HGP) Type 372 and 377 adds the decorative capability of a soft edge to any typical laminate use. Common applications of postforming laminates are formed edges for counters, desktops, cabinet doors and drawer panels. Type 372 and 377 is intended for use on vertical and horizontal interior surfaces where it is necessary or desirable to roll the laminate on a simple radius over the edge of the substrate. This eliminates seams and leaves an attractive surface.

Product Composition

Decorative surface papers impregnated with melamine resins are pressed over kraft paper core sheets impregnated with phenolic resin. These sheets are then bonded at pressures greater than 1000 pounds per square inch at temperatures approaching 300°F (149°C). Finished sheets are trimmed, and the backs are sanded to facilitate bonding.

Basic Limitations

Wilsonart VDL Laminate is for interior use only and is not recommended for direct application to plaster, concrete walls, or gypsum wallboard. It is not structural material and must be bonded to a suitable substrate.

Do not subject Wilsonart VDL Laminate to extremes in humidity, temperatures higher than 275°F (135°C) for substantial periods of time, or intense, continuous, direct sunlight.

Patterns & Colors

Not all sizes are available in all designs & finishes. For information on specific designs, please check availability at www.wilsonart.com or contact your Wilsonart Representative.

Finishes

#01 High Gloss - Premium

A mirror sheen finish, which gives a smooth brilliant appearance. #01-High Gloss finish also features AEON^{\top} technology and can be used for horizontal applications such as countertops and light-to-medium commercial applications. Excellent for vertical applications and carries a premium upcharge. *Glossometer reading: MD and CD 110* \pm *10*.

#07 Textured Gloss - Premium

A textured finish, which reproduces the high sheen of waxed wood furniture. Recommended for horizontal and vertical applications. #07 finish features AEON technology and carries a premium upcharge. Glossometer reading: MD and CD 42 ± 4 .

#12 SoftGrain - Premium

A dense woodgrain structure that is low gloss and soft to the touch. Subtle highlights of reflectivity randomly occur within the embossed grains, creating a sophisticated raw wood look. #12 finish features AEON technology and carries a premium upcharge. Recommended for horizontal and vertical applications. Glossometer reading: MD and CD 6 ± 1 .

#18 Linearity - Premium

A directional texture running the length of the sheet, having a narrow, random, matte-gloss linear quality. It is complementary to linear wood-grains, and linear patterns (such as the "Satin" series), and provides dimension and visual movement to solid colors. #18 finish features AEON technology and carries a premium upcharge. Glossometer reading: MD and CD 18 ± 4

• #22 Antique - Premium

A mixture of varying low gloss features combined with organic movement, indicative of the surface of an aged stone or an antique metal. Recommended for horizontal and vertical applications. Antique features AEON Enhanced Performance Technology and carries a premium upcharge. *Glossometer reading: MD and CD* 9 ± 3

#38 Fine Velvet Texture - Standard

A smooth textured finish with moderate reflective value. Glossometer reading: MD and CD 14 ± 2

• #52 Quarry - Premium

Premium finish emulating the "pitted" look of polished natural stone. Recommended for horizontal and vertical applications. #52 features AEON technology and carries a premium upcharge. Glossometer reading: MD 55 ± 5 .

• #60 Matte - Standard

Textured finish with a moderate reflective quality. Recommended for horizontal and vertical applications. Glossometer reading: MD and CD 10 ± 2 .

• #78 FineGrain - Premium

The FineGrain premium finish features the polish and luxe of a real wood veneer, with a subtle, narrow grain structure that runs the length of the sheet. #78 finish features AEON technology and carries a premium. Glossometer reading: MD and CD 38 ± 3 .

NOTE: Glossometer readings are made at a 60° angle of incidence. MD refers to the machine direction of a laminate sheet, and CD refers to the cross direction.

Finish Availability: Not all finishes are available in all patterns/colors. Some finish options have limited size availability. Please check with your Wilsonart representative or consult the pattern availability lookup on our website (www.wilsonart.com) to verify size availability by finish type.

Standard Sheet Sizes

| 18" v 96" | 60" x 144" |
|-----------------|-----------------|
| 1219mm x 2438mm | 1524mm x 3658mm |

Thicknesses and Weights

| Description | 362/367 | 372/377 |
|------------------------|--|--------------------------------------|
| Thickness | 0.028" + 0.001 - 0.004" (0.7mm + 0.03 - 0.10mm) | 0.039" ± 0.005" (0.99mm ± 0.13mm) |
| Weight per square foot | 0.186# | 0.260# |

3. Technical Data

Physical Properties of Vertical Surface Laminates (VDL)

| NEMA Test | Typical Wilsonart Type 362/367 | NEMA Standard VGP | ISO 4586-3 VGP |
|---|--|--|---|
| Thickness | 0.028" + 0.001 - 0.004" (0.7mm + 0.03 - 0.10mm) | $0.028" \pm 0.004"$ (0.7mm ± 0.10 mm) | N/A |
| Appearance | No ABC def. | No ABC def. | N/A |
| Light Resistance | Slight effect | Slight effect | Slight effect |
| Cleanability (cycles) | 10 | 20 (max.) | 20 (max.) |
| Stain Resistance Reagents 1-10 Reagents 11-15 | No effect Slight effect | No effect Moderate effect | No effect Moderate effect |
| Boiling Water Resistance | No effect | Slight effect | Slight Effect (Gloss) No Effect (Other Finishes) |
| High Temperature Resistance | Slight effect | Slight effect | Slight Effect (Gloss) No Effect (Other Finishes) |
| Impact Resistance | 40" (1016mm) | 20" (508mm) | 23.5" (600mm) |
| Radiant Heat Resistance | 120 seconds | 80 sec. (min.) | ≥ 200 sec. |
| Dimensional Stability Machine Direction Cross Direction | 0.5% 0.8% | 1.1% (max.) 1.4% (max.) | 1.1% (max.) 1.4% (max.) |
| Surface Wear Resistance (cycles) | Meets or Exceeds 400 | 400 (min.) | 350 (min.) |
| Formability | *1/2" radius (13mm) | *1/2"radius (13mm) | 7/16" radius (11mm) 9/16" radius(14.7mm) |
| Blistering | 45 seconds | 40 seconds | ≥ 40 seconds |

^{*}Radius for face is actually the radius of the form around which the laminate is postformed.

Physical Properties of Postforming Laminate (VDL)

| NEMA Test | Typical Wilsonart | NEMA Standard | ISO 4586-3 |
|----------------------------------|-----------------------|----------------------|---|
| | Type 372/377 | HGP | HGP |
| Thickness | 0.039" ± 0.005" | 0.039" ± 0.005" | 0.039" ± 0.005" |
| | $(0.99mm \pm 0.13mm)$ | $(1mm \pm 0.12mm)$ | $(1mm \pm 0.12mm)$ |
| Appearance | No ABC def. | No ABC def. | No ABC def. |
| Light Resistance | Slight effect | Slight effect | Slight effect |
| Cleanability (cycles) | 10 | 20 (max.) | 20 |
| Stain Resistance | | | |
| Reagents 1-10 | No effect | No effect | No effect |
| Reagents 11-15 | Slight effect | Moderate effect | Moderate effect |
| Boiling Water Resistance | No effect | Slight effect | Slight Effect (Gloss) No Effect (Other Finishes) |
| High Temperature Resistance | Slight effect | Slight effect | Slight Effect (Gloss) No Effect (Other Finishes) |
| Impact Resistance | 55" (1397mm) | 30" (762mm) (min.) | 31.5" (800mm) |
| Radiant Heat Resistance | 140 seconds | 100 sec. (min.) | ≥ 200 sec. |
| Dimensional Stability | | | |
| Machine Direction | 0.5% | 1.1% (max.) | 1.1% (max.) |
| Cross Direction | 0.8% | 1.4% (max.) | 1.4% (max.) |
| Surface Wear Resistance (cycles) | Meets or Exceeds 400 | 400 (min.) | 350 (min.) |
| Formability* | *5/8" face (16.00mm) | *5/8" face (16.00mm) | *9/16" face (14.27mm) *3/4" back (19.05mm) |
| Blistering | 70 seconds | 55 seconds | ≥ 40 seconds |

^{*}Radius for face is actually the radius of the form around which the laminate is postformed.

Typical Fire Test Data

High-pressure laminates are subject to Flame Spread and Smoke Developed standards in structures where codes establish such conditions.

Test data to determine compliance with these codes are obtained by the Steiner Tunnel Test method of the American Society for Testing Materials (ASTM-E-84, Standard Test Method for Surface Burning Characteristics of Building Materials). Tests are conducted in accordance with test method and mounting procedure as described in paragraph X1.7.2 of the test method. This procedure is cataloged by Underwriters Laboratories, Inc. as UL 723.

Specific Flame Spread and Smoke Developed properties for Virtual Design Library types will depend on the specific design selected. Testing on individual designs will be required to verify these values.

Model Code Designations used to determine flame spread classification

| Flame Spread Classification (Max. Rating) | International (IBC) | Life Safety (NFPA 101) |
|---|---------------------|---------------------------|
| 25 | A | A |
| 75 | В | В |
| 200 | С | С |

RE: Architectural Woodwork Standards, 1st Edition, Version 1.0, - 2009

All Model Codes regulate the generation of smoke by interior finish material. In all cases they specify a maximum smoke development rating of 450.

Codes and Certifications

General Standards

Wilsonart product types 362, 367, 372 and 377 conform to the voluntary standards of the American National Standards Institute/National Electrical Manufacturers Association (ANSI/NEMA) LD3-2005, for thickness, performance properties and appearance. Wilsonart product types 362, 367, 372 and 377 meet or exceed the International Standards Organization specifications as found in ISO 4586, titled "High-Pressure Decorative Laminate (HPDL) — Sheets Based on Thermosetting Resins — Part I: specifications."

The UL GREENGUARD Environmental Institute has awarded its UL GREENGUARD Indoor Air Quality Certification to Wilsonart Laminate. All Wilsonart® Laminate product types were tested under the stringent UL GREENGUARD Standards for low-emitting products. All UL GREENGUARD Indoor Air Quality Certified products ensure minimal impact on the indoor environment. For a copy of the certificate, visit www.greenguard.org.

4. Installation: Fabrication and Assembly Recommendations

Wilsonart VDL Laminate must be bonded to a substrate of reliable quality, such as particleboard, medium density fiberboard or plywood with one A-face. High-pressure laminate, plaster, concrete and gypsum board should not be considered suitable substrates. Wilsonart® VDL may not be used as a structural member.

Both the laminate sheet and the substrate material should be ordered sufficiently in advance of fabrication to allow time to reduce internal moisture. During cold months, store laminate sheets and substrate material in a heated room with moving air. During periods of warm weather with high humidity, still air is preferable.

Bond with adhesives and follow the techniques recommended by the adhesive manufacturer. Recommended adhesives are permanent types, such as urea and polyvinyl acetate (PVA), and contact types. Wilsonart adhesives are recommended for most bonding conditions.

To avoid stress cracking, do not use square-cut inside corners. All inside corners should have a minimum of 1/8" (3.175mm) radius and all edges should be routed smooth.

Drill oversized holes for screws or bolts. Screws or bolts should be slightly countersunk into the face side of a laminate-clad substrate.

Take care to ensure an appropriate acclimation between the laminate and the substrate prior to fabrication. The face and backing laminates and the substrate should be conditioned in the same environment for 48 hours before fabrication.

Recommended conditioning temperature is about 75°F (24°C). Laminates should be conditioned at 45% to 55% relative humidity.

With postforming machinery, Wilsonart 362/367 and 372/377 will postform at a nominal sheet temperature range of 325°F to 350°F (163°C to 176°C) in 20 ± 5 seconds.

Carbide-tipped saw and router blades should be used for cutting. High tool speed and low feed speed are advisable. Cutting blades should be kept sharp. Use a hold-down to prevent any vibration.

5. Warranty

6. Maintenance

7. Technical Services

For samples, literature, questions or technical assistance, please contact our toll-free Hotline at (800) 433-3222, Monday through Friday, 8 am - 5 pm, CST.

Specification Form

| Specification Form | |
|--|---|
| Surface shall be Wilsonart® Virtual Design L | ibrary Laminate, produced by Wilsonart LLC, |
| Temple, Texas 76503-6110 | |
| Type: Specify 362, 367, 372 or 377 | |
| Surface | |
| Color Number: | Color Name: |
| Einiah | |
| Finish | Nama |
| Number: | Name: |
| Edge Trim | |
| Color Number: | Color Name: |
| | |
| Adhesive | 0 1 7 |
| Name: | Grade/Type: |
| Brand: Wilsonart® Adhesive | |

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