

## 1. Manufacturer

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## 2. Product Description

### **Recommended Uses**

Wilsonart® High Wear Laminate offers five times the abrasion and scuff resistance of conventional laminate. It is produced for commercial, contract and institutional applications where a decorative surface must withstand more than normal wear. Typical applications of High Wear Laminate include checkout counters in retail stores; restaurant and fast food fixtures and casework; tabletops; change counters; bank deal plates and tellers' desks; wall panels, wainscoting and institutional furniture.

High Wear Laminate is manufactured in three extra-high wear (HW) types:

- **General Purpose (HGS) Type 107HW** is produced for both horizontal and vertical interior applications such as commercial interior doors, walls and wainscoting, which must combine a pleasing appearance with enhanced resistance to both impact and abrasion.
- **Vertical Surface (VGS) Type 335HW** is intended for vertical applications where a functional, durable, decorative surface must absorb somewhat less impact than a comparable horizontal surface.
- **Postforming (HGP) Type 350HW** 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 a substrate. This eliminates seams and leaves an attractive surface.

### **Product Composition**

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

### **Basic Limitations**

Wilsonart High Wear Laminates are interior surfacing, not structural materials. They must be bonded to suitable substrates.

Do not subject these laminates to extremes in humidity or to temperatures over 275°F (135°C) for sustained periods of time.

They should not be exposed to flame, molten metal, metallic sparks or intense, continuous direct sunlight. They should not be used as cutting surfaces.

Wilsonart High Wear Laminate is for interior use only and should not be subjected to extremes in humidity or to temperatures over 275°F (135°C) for sustained periods of time. It also should not be exposed to intense, continuous, direct sunlight.

### Pattern and Color Availability

Wilsonart High Wear Laminate is available in most **Standard Line (DG1)** patterns.

Wilsonart By You and Wilsonart® VDL Laminate NOT available in High Wear  
Non-Standard Line (DG2) patterns are NOT available in High Wear

Please verify pattern, size and finish availability by checking the Laminate Pattern Availability Search at [www.wilsonart.com](http://www.wilsonart.com).

### Finishes

- #60 Matte ONLY  
A textured finish with a moderate reflective quality. *Nominal Glossometer Reading = 10*  
*NOTE: Nominal Glossometer Readings are made at a 60° angle of incidence.*

### Standard Sheet Widths

48"	60"
1219mm	1524mm

### Standard Sheet Lengths

96"	120"	144"
2438mm	3048mm	3658mm

### Thickness and Weight

Description	General Purpose Type 107HW (HGS)	Vertical Surface Type 335HW (VGP & VGS)	Postforming Type 350HW (HGP & HGL)
Thickness	0.045" ± 0.005" (1.14mm ± 0.13mm)	0.028" + 0.001" - 0.004" (0.71mm + 0.03 - 0.10mm)	0.036" ± 0.005" (0.91mm ± 0.13mm)
Weight per square foot	0.322#	0.186#	0.260#

## 3. Technical Data

### Physical Properties of High Wear Laminate

ISO 4586 Test	Wilsonart High Wear Laminate	Typical Wilsonart High Wear Laminate Value	ISO 4586-3
Wear Resistance (cycles)	All types	3,200	1,000 (min.)
Boiling Water Resistance	All types	No effect	No effect
High Temperature Resistance	All types	Slight effect	No effect
Radiant Heat Resistance			
HGS	107HW	210 seconds	≥ 200 seconds
VGS	335HW	200 seconds	≥ 200 seconds
HGP	350HW	205 seconds	≥ 200 seconds
Stain Resistance Reagents			
1-10	All types	No effect	No effect
11-15	All types	Moderate effect	Moderate effect
Light Resistance	All types	Slight effect	Slight effect
Impact Resistance			
HGS	107HW	60" (1524mm)	31.5" (800mm)
VGS	335HW	24" (609mm)	23.5" (600mm)
HGP	350HW	50" (1270mm)	31.5" (800mm)
Cleanability (cycles)	All types	10	20 (max.)
Appearance	All types	No ABC defects	N/A
Formability**	350HW	9/16" face (14mm) 3/16" back (5mm)	*9/16" face (14.27mm) *3/4" back (19.05mm)

\*NEMA Standards given are for standard high-pressure decorative laminates.

\*\*Radius listed for face is actually the radius of the form around which the laminate is postformed. The radius for back is actually the radius to which the decorative face is postformed.

**Dimensional Stability: Gross Dimensional Change**

Wilsonart High Wear Laminate	Direction of Change	Typical Wilsonart High Wear Laminate Value	ISO 4586-3
<b>HGS General Purpose (107HW)</b>	Machine Direction	0.3%	1.1% (max.)
	Cross Direction	0.7%	1.4% (max.)
<b>VGS Vertical Surface (335HW)</b>	Machine Direction	0.5%	1.1% (max.)
	Cross Direction	0.8%	1.4% (max.)
<b>HGP Postforming (350HW)</b>	Machine Direction	0.5%	1.1% (max.)
	Cross Direction	0.8%	1.4% (max.)

\*NEMA Standards given are for standard high-pressure decorative laminates.

**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 were 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.

Here is typical data for Wilsonart High Wear Laminates:

**Typical Flame Spread and Smoke Developed Properties**

Product Type	Test Condition	Flame Spread	Smoke Developed
<b>General Purpose Type 107HW</b>	Unbonded	55	55
<b>Vertical Surface Type 335HW</b>	Unbonded	40	40
<b>Postforming Type 350HW</b>	Unbonded	45	55

When you wish to specify decorative laminate for a Class I or A fire rating, please refer to the Fire-Rated Laminate Tech Data.

**Model Code Designations used to determine flame spread classification**

Flame Spread Classification (Maximum Rating)	International (IBC)	Life Safety (NFPA 101)
25	A	A
75	B	B
200	C	C

Reference: Architectural Woodwork Quality Standard, 8<sup>th</sup> Edition, Version 1.0 - 2003

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**

Wilsonart® Laminate Types 107, 335 and 350 conform to the voluntary standards of the American National Standards Institute, for thickness, performance properties and appearance. Wilsonart Laminate Types 107,335 and 350 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](http://www.greenguard.org).

All Wilsonart Laminate products are tested regularly for code compliance for building construction and other applications. Here are some examples of frequently encountered regulations:

#### **Basic Construction**

U.S. Federal Specification L-P 508H, April 9, 1977, "Plastic Sheets, Laminated, Decorative and Nondecorative" spells out criteria for general purpose, vertical and postforming types, as well as backing sheets for federal installation. High Wear Laminate types in compliance include 107HW General Purpose, 335HW Vertical Surface and 350HW Postforming.

NSF International (NSF) #35 "Laminated Plastic for Surfacing for Food Service Equipment." All solid colors and printed patterns in Basic Types 107, 335 and 350, with #60 finish comply.

#### **Mobile Homes**

U.S. Federal Register August 9, 1984, Housing and Urban Development Mobile Home Construction and Safety Standard, (24CFR), Part 3280.203. High Wear Laminate Type 107HW General Purpose complies with paragraphs 1, 4 and 6.

#### **Motor Vehicles/Interiors**

U.S. Federal Motor Vehicle Safety Standard (FMVSS) 302, "Flammability of Interior Materials." High Wear Laminate types in compliance include patterns in 107HW General Purpose, 335HW Vertical Surface and 350HW Postforming types.

#### **Branded Cleaner and Sanitizer Resistance for Wilsonart® High Wear Laminate**

No effect was exhibited except as noted (\* or \*\*) on the following:

1. Clorox Healthcare Bleach Germicidal Cleaner \*
2. Clorox Healthcare Versa Sure Cleaner Disinfectant Wipes
3. Oxivir TB
4. Oxivir 1
5. Virex II 256
6. Benefect
7. PDI Super Sani-Cloth Germicidal Disposable Wipes
8. PDI Sani-Prime Germicidal Spray
9. Expose II 256
10. Stride Floral Neutral Cleaner \*
11. PURELL Advanced Instant Hand Sanitizer \*

Test procedure: Listed materials were placed in contact with Wilsonart High Wear Laminate surface under 1" (25.4mm) diameter watch cover glass for 16 hours duration prior to evaluation for effect. The branded cleaners and sanitizers listed above were cleaned with water only.

\* Causes slight change of gloss or color.

\*\* Causes slight damage, with degree of damage proportionate to length of exposure and concentration.

## **12. Installation: Fabrication and Assembly Recommendations**

Fabrication should follow approved methods. Assembled pieces should meet the specifications of KCMA (Kitchen Cabinetmakers Manufacturers Association), ANSI A-161.2-1998 (revised), and “Architectural Woodwork Quality Standards Guide Specification and Quality Certification Program” guidelines of the Architectural Woodwork Institute where applicable.

Wilsonart Laminates 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. High Wear laminate may not be used as structural members.

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” (3.18mm) 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 approximately 75°F (24°C). Laminates should be conditioned at 45% to 55% relative humidity.

With postforming machinery, Wilsonart 335HW and 350HW will postform at a nominal sheet temperature range of 325°F to 338°F (163°C to 170°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.

## **13. Warranty**

## **14. Maintenance**

## **15. 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:**

Surface shall be Wilsonart Laminate, produced by Wilsonart LLC, Temple, Texas 76503-6110.

Type: 107HW, 335HW or 350HW

Surface

Color Number: \_\_\_\_\_

Color Name: \_\_\_\_\_

Finish

Number: \_\_\_\_\_

Name: \_\_\_\_\_

Edge Trim

Color Number: \_\_\_\_\_

Color Name: \_\_\_\_\_

Adhesive

Name: \_\_\_\_\_

Grade/Type: \_\_\_\_\_

Brand: Wilsonart® Adhesive

Material shall equal or exceed performance standards set by the American National Standards Institute/National Electrical Manufacturers Association (ANSI/NEMA) LD3-2005 for high-pressure laminate. Fabrication shall comply with "Architectural Woodwork Quality Standards, Guide Specifications and Quality Certification Program" guidelines of the Architectural Woodwork Institute.

Wilsonart® High Wear Laminate Technical Data

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