TECHNICAL DATA
Wilsonart® Laminate
Basic Types 107, 335, 350



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## 1. Manufacturer

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## 2. Product Description

#### Recommended Uses

Wilsonart® Laminate, types 107, 335, and 350, 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.

- General Purpose (HGS) Type 107 is most frequently used for work surfaces on counters, islands, vanities, desks and tables. Typical vertical uses include surfacing for wall panels, teller cages and the front panels of workstations, such as those in hospitals, airports and restaurants. Type 107 is produced for both horizontal and vertical interior applications where the surface must be functional, durable and decorative.
- Vertical Surface (VGP) Type 335 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 335 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 radius edges.
- Postforming (HGP) Type 350 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 350 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 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 Laminate to extremes in humidity, temperatures higher than 275°F (135°C) for substantial periods of time, or intense, continuous, direct sunlight.

#### **Patterns & Colors**

Available in the full range of Wilsonart solid colors, stones, marbles, woodgrains, leathers and patterns. See all patterns and colors at <a href="https://www.wilsonart.com">www.wilsonart.com</a>. Please see actual sample before specifying.

Finishes — Confirm finish availability on individual designs by going to www.wilsonart.com

• #01 High Gloss - Premium

A mirror sheen finish, which gives a smooth, brilliant appearance. #01-High Gloss finish also features AEON<sup>m</sup> 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  $42 \pm 4$ .

#12 SoftGrain - Premium

A dense wood grain 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*  $8 \pm 2$ .

• #16 Casual Rustic - Premium

A woodgrain texture with a blend of grain variations ranging from linear to subtle movement with random, irregular features. The overall low gloss surface is accented with higher sheen woodgrain ticking and random highlights. #16 finish features AEON technology and carries a premium upcharge. Recommended for horizontal and vertical applications. *Glossometer reading:* MD and CD 6  $\pm$  2.

• #18 Linearity - Premium

A directional texture running the length of the sheet, having a narrow, random and 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*  $\pm$  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  $9\pm3$ 

#28 Gloss Line - Premium

A linear woodgrain texture with varied widths of narrow grain structures in an alternating mix of matte and gloss surfaces areas. Recommended for horizontal and vertical applications. Gloss Line features AEON Enhanced Performance Technology and carries a premium upcharge. Glossometer reading: MD and CD  $5\pm2$ 

#38 Fine Velvet Texture

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

#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  $55\pm5$ .

#60 Matte

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

• #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  $38 \pm 3$ .

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 and colors. Some finish options have limited size availability. Please check with your Wilsonart representative or consult the pattern availability lookup on our website at <a href="https://www.wilsonart.com">www.wilsonart.com</a>, to verify size availability by finish type.

### **Standard Sheet Widths**

36"	48"	60"
914mm	1219mm	1524mm

**Standard Sheet Lengths** 

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

NOTE: Not all sizes are available from stock; contact your Wilsonart representative for details on local availability. Minimums apply to non-standard designs and finishes in sizes other than 48"x96" and 60"x144". Please check with your Wilsonart representative.

**Thickness and Weight** 

Description	107	335	350
Thickness	0.048" ± 0.005"	0.028" + 0.001 - 0.004"	0.039" ± 0.005"
THICKHESS	$(1.22 \text{mm} \pm 0.13 \text{mm})$	(0.7mm + 0.03 - 0.10mm)	$(0.99 \text{mm} \pm 0.13 \text{mm})$
Weight per square foot	0.322#	0.186#	0.260#

## 3. Technical Data

**Physical Properties of General Purpose Laminates** 

NEMA Test	Typical Wilsonart Type 107	NEMA Standard HGS	ISO 4586-3 HGS	
Thickness	$0.048" \pm 0.005"$ (1.22mm $\pm 0.13$ mm)	N/A	N/A	
Appearance	No ABC def.	No ABC def.	N/A	
Light Resistance	Slight effect	Slight effect	Slight Effect	
Cleanability (cycles)	10	20 (max.)	10	
Stain Resistance Reagents 1-10 Reagents 11-15	No effect Slight effect	No effect Moderate effect	No effect Moderate effect	
Boiling Water Resistance	Slight Effect (Gloss) No Effect (Other Finishes)	No effect	Slight Effect (Gloss) No Effect (Other Finishes)	
High Temperature Resistance	Slight effect	Slight effect	Slight Effect (Gloss) No Effect (Other Finishes)	
Impact Resistance	65" (1651mm)	50" (1270mm)	31.5" (800mm)	
Radiant Heat Resistance	210 seconds	125 sec. (min.)	≥ 200 sec.	
Dimensional Stability  Machine Direction  Cross Direction	0.3% 0.7%	0.5% 0.9%	1.1% (max.) 1.4% (max.)	

Surface Wear Resistance (cycles)	Meets or Exceeds 400	400 (min.)	350 (min.)
Formability	Not applicable	Not applicable	Not applicable
Blistering	Not applicable	Not applicable	Not applicable

**Physical Properties of Vertical Surface Laminates** 

NEMA Test	Typical Wilsonart Type 335	NEMA Standard VGS	NEMA Standard VGP	ISO 4586-3 VGP
Thickness	0.028" + 0.001 - 0.004" (0.7mm + 0.03 - 0.10mm)	N/A	N/A	N/A
<b>A</b> ppearance	No ABC def.	No ABC def.	No ABC def.	N/A
Light Resistance	Slight effect	Slight effect	Slight effect	Slight effect
Cleanability (cycles)	10	20 (max.)	20 (max.)	20 (max.)
Stain Resistance Reagents 1-10 Reagents 11-15	No effect Slight effect	No effect Moderate effect	No effect Moderate effect	No effect Moderate effect
Boiling Water Resistance	Slight Effect (Gloss) No Effect (Other Finishes)	No effect	Slight effect	Slight Effect (Gloss) No Effect (Other Finishes)
High Temperature Resistance	Slight Effect (Gloss) No Effect (Other Finishes)	Slight effect	Slight effect	Slight Effect (Gloss) No Effect (Other Finishes)
Impact Resistance	40" (1016mm)	20" (508mm)	20" (508mm)	23.5" (600mm)
Radiant Heat Resistance	200 seconds	80 sec. (min.)	80 sec. (min.)	≥ 200 sec.
<b>Dimensional Stability</b> Machine Direction Cross Direction	0.5% 0.8%	0.7% (max.) 1.2% (max.)	1.1% (max.) 1.4% (max.)	1.1% (max.) 1.4% (max.)
Surface Wear Resistance (cycles)	Meets or Exceeds 400	400 (min.)	400 (min.)	350 (min.)
Formability	5/16" radius (7.93mm)	Not applicable	1/2" radius (13mm)	7/16" radius (11mm) 9/16" radius(14.7mm)
Blistering	45 seconds	Not applicable	40 seconds	≥ 40 seconds

<sup>\*</sup>Radius 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.

**Physical Properties of Postforming Laminate** 

NEMA Test	Typical Wilsonart	NEMA Standard	ISO 4586-3
NEWA Test	Type 350	HGP	HGP
Thickness	0.039" ± 0.005"	0.039" ± 0.005"	0.039" ± 0.005"
THICKHESS	$(0.99 \text{mm} \pm 0.13 \text{mm})$	$(1mm \pm 0.12mm)$	$(1mm \pm 0.12mm)$
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
<b>Boiling Water</b>	Slight Effect (Gloss)	Slight Effect (Gloss)	Slight Effect (Gloss)
Resistance	No Effect (Other Finishes)	No Effect (Other Finishes)	No Effect (Other Finishes)

High Temperature Resistance	Slight Effect (Gloss) No Effect (Other Finishes) Slight Effect (Gloss) No Effect (Other Finishes)		Slight Effect (Gloss) No Effect (Other Finishes)	
Impact Resistance	55" (1397mm)	30" (762mm) (min.)	31.5" (800mm)	
Radiant Heat Resistance	205 seconds	100 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*	*5/16" face (7.93mm) *3/8" back (9.52mm)	*5/8" face (16.00mm)	*9/16" face (14.27mm) *3/4" back (19.05mm)	
Blistering	65 seconds	55 seconds	≥ 40 seconds	

<sup>\*</sup>Radius 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.

## **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 laminates, averaged from two specific tests:

**Typical Flame Spread and Smoke Developed Properties** 

Product Type	Test Condition	Flame Spread	Smoke Developed
General Purpose Type 107	Unbonded	50	45
Vertical Surface Type 335	Unbonded	45	40
Postforming Type 350	Unbonded	60	35
General Purpose Type 107	Bonded with contact adhesive to particleboard substrate; 3/8"	40	100
Vertical Surface Type 335	Bonded with contact adhesive to particleboard substrate; 3/8"	40	155
Postforming Type 350	Bonded with contact adhesive to particleboard substrate; 3/8"	50	140

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 (Max. Rating)	International (IBC)	Life Safety (NFPA 101)
25	Α	Α
75	В	В
200	С	С

RE: 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**

#### **General Standards**

Wilsonart Laminates, types 107, 335 and 350, 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 Laminates 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."

## **Specific Product Standards**

U.S. Federal Specification L-P 508H, April 9, 1977, "Plastic Sheets, Laminated, Decorative and Non-decorative." Spells out criteria for decorative laminates for federal installations. Wilsonart 107, 335 and 350 laminates comply.

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, comply.

U.S. Federal Register, August 9, 1984, Housing and Urban Development Mobile Home Construction and Safety Standard, (24CFR) 3280.203. General Purpose Type 107 and Vertical Surface Type 335 comply.

U.S. Federal Test Method, Federal Aviation Regulation, DOT, Part 25.853, Airworthiness Standards: Transport Category Airplane (Interior Finish). Vertical Surface Type 335 and Postforming Type 350 comply with parts A and C.

U.S. Federal Motor Vehicle Safety Standard (FMVSS) 302, "Flammability of Interior Materials." Basic Types 107, 335 and 350 comply.

U.S. Military Standard MIL-P-17171E (SHIPS)/Plastic Laminate. General Purpose Type 107 complies.

# 4. 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 Specifications 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. Basic Types 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" (3.175mm) 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 335 and 350 will postform at a nominal sheet temperature range of 325°F to 338°F (163°C to 170°C) in  $20\pm5$  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: Surface shall be Wilsonart® Laminate, produced by Wilsonart LLC, Temple, Texas 76503-6110				
Type: Specify 107, 3	335 or 350			
Surface Color Number:		Color Name:		
Finish Number:		Name:		
Edge Trim Color Number:		Color Name:		
Adhesive Name: Brand:	Wilsonart® Adhesive	Grade/Type:		

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