Wilsonart® Laminate Basic Types (#107, #335, #350)
Technical Data

Manufacturer
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Product Description

Recommended Uses
Wilsonart® Laminate 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 radiused 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. Please see actual sample before specifying.

Finishes

- #1 High Gloss
  A mirror sheen finish which gives a smooth, brilliant appearance. Excellent for any vertical application. Laminates with a high gloss finish can be used for horizontal application only in light use areas. We recommend that it not be used on horizontal work surfaces such as countertops. *Glossometer reading: MD and CD 100 ± 10.*
- #7 Textured Gloss
  A textured finish which reproduces the high sheen of waxed wood furniture. Recommended for horizontal and vertical application. **Available only on those designs for which it is the standard finish**. *Glossometer reading: MD and CD 36 ± 3.*
- #35 Mirage
  A lightly textured finish featuring subtle variations in matte and glass, creating the illusion of depth. Available only in the WilsonartHD product line; not available on other patterns or colors. *Glossometer reading: MD and CD 50 ± 20.*
- #38 Fine Velvet Texture
  A smooth textured finish with moderate reflective value. Recommended for horizontal and vertical application. **Available only on those designs for which it is the standard finish**. Glossometer reading: MD and CD 14 ± 2
- #50 Touchstone
  A pebbled texture with the look and feel of coarse-grained sand. Recommended for vertical and non-writing horizontal surfaces in residential and commercial applications. *Glossometer reading: MD and CD 10 ± 2.*
- #52 Quarry
  Premium finish emulating the "pitted" look of polished natural stone. Available on a select number of designs only. *Glossometer reading: MD 55* ± 5.
- #60 Matte
  Textured finish with a moderate reflective quality. Recommended for horizontal and vertical application. *Glossometer reading: MD and CD 10 ± 2.*
- #90 Crystal
  A very finely beaded texture that minimizes smudges and finger marks and improves scratch resistance. Recommended for horizontal and vertical application. *Glossometer reading: MD and CD 13 ± 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/design/patternavail) to verify size availability by finish type.

Standard Sheet Widths

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

Standard Sheet Lengths

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” (1.22mm ± 0.13mm)	0.028” + 0.001 - 0.004” (0.7mm + 0.03 - 0.10mm)	0.039” ± 0.005” (0.99mm ± 0.13mm)
Weight per square foot	0.322#	0.186#	0.260#

Technical Data

Physical Properties of General Purpose Laminates

NEMA Test	Typical Wilsonart Type 107	NEMA Standard HGS
Thickness	**0.048" ± 0.005" (1.22mm ± 0.13mm)**	0.048" ± 0.005" (1.2mm ± 0.13mm)
Appearance	**No ABC def.**	No ABC def.
Light Resistance	**Slight effect**	Slight effect
Cleanability (cycles)	**10**	20 (max.)
Stain Resistance Reagents 1-10 Reagents 11-15	 **No effect** **Slight effect**	 No effect Moderate effect
Boiling Water Resistance	**No effect**	No effect
High Temperature Resistance	**Slight effect**	Slight effect
Impact Resistance	**65" (1651mm)**	50" (1270mm)
Radiant Heat Resistance	**160 seconds**	125 sec. (min.)
Dimensional Stability Machine Direction Cross Direction	 **0.3%** **0.7%**	 0.5% 0.9%
Surface Wear Resistance (cycles)	**700**	400 (min.)
Formability	**Not applicable**	Not applicable
Blistering	**Not applicable**	Not applicable

Physical Properties of Vertical Surface Laminates

NEMA Test	Typical Wilsonart Type 335	NEMA Standard VGS	NEMA Standard VGP
Thickness	**0.028" + 0.001 - 0.004" (0.7mm + 0.03 - 0.10mm)**	0.028" ± 0.004" (0.7mm ± 0.10mm)	0.028" ± 0.004" (0.7mm ± 0.10mm)
Appearance	**No ABC def.**	No ABC def.	No ABC def.
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**	No effect	Slight effect
High Temperature Resistance	**Slight effect**	Slight effect	Slight effect
Impact Resistance	**40" (1016mm)**	20" (508mm)	20" (508mm)
Radiant Heat Resistance	**120 seconds**	80 sec. (min.)	80 sec. (min.)
Dimensional Stability Machine Direction Cross Direction	 **0.5%** **0.8%**	 0.7% (max.) 1.2% (max.)	 1.1% (max.) 1.4% (max.)
Surface Wear Resistance (cycles)	**700**	400 (min.)	400 (min.)
Formability	**7/16" radius (11mm)**	Not applicable	1/2" radius (13mm)
Blistering	**45 seconds**	Not applicable	40 seconds

*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 Type 350**	**NEMA Standard HGP**
Thickness	**0.039" ± 0.005" (0.99mm ± 0.13mm)**	0.039" ± 0.005" (1mm ± 0.12mm)
Appearance	**No ABC def.**	No ABC def.
Light Resistance	**Slight effect**	Slight effect
Cleanability (cycles)	**10**	20 (max.)
Stain Resistance Reagents 1-10 Reagents 11-15	 **No effect** **Slight effect**	 No effect Moderate effect
Boiling Water Resistance	**No effect**	Slight effect
High Temperature Resistance	**Slight effect**	Slight effect
Impact Resistance	**55" (1397mm)**	30" (762mm) (min.)
Radiant Heat Resistance	**140 seconds**	100 sec. (min.)
Dimensional Stability Machine Direction Cross Direction	 **0.5%** **0.8%**	 1.1% (max.) 1.4% (max.)
Surface Wear Resistance (cycles)	**700**	400 (min.)
Formability*	***9/16" face (14.28mm)** ***3/16" back (4.76mm)**	*5/8" face (16.00mm)
Blistering	**70 seconds**	55 seconds

*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

Product Type	Test Condition	Flame Spread	Smoke Developed
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		A		A
75		B		B
200		C		C

(RE: Architectural Woodwork Quality Standard, 8th 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 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. Various grades of Wilsonart laminates 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 GREENGUARD Environmental Institute™ has awarded its GREENGUARD Indoor Air Quality Certification to Wilsonart Laminate. All Wilsonart Laminate product types were tested under the stringent GREENGUARD Standards for low-emitting products. All GREENGUARD Indoor Air Quality Certified® products ensure minimal impact on the indoor environment. For a copy of the certificate, visit www.greenguard.org.

Specific Product Standards

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

National Sanitation Foundation (NSF) #35, "Laminated Plastic for Surfacing for Food Service Equipment." All solid colors and printed patterns in Basic Types 107, 335 and 350, with finishes 1, 7 and 60 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.

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 $\pm$ 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.

Warranty

Wilsonart International, Inc. warrants that, under normal use and service, this shall conform to the standards set forth on the applicable technical data sheets for a period of twelve (12) months from the date of sale to the first consumer purchaser. Dealers and distributors are provided with the technical data sheets that contain specific standards of performance for the products. In the event that this product does not perform as warranted, the first purchaser's sole remedy shall be limited to repair or replacement of all or any part of the product that is defective, at the manufacturer's sole discretion.

This warranty applies only to product:
1. In its original installation; and
2. Purchased by the first consumer purchaser.

This warranty is not transferable, and expires upon resale or transfer by the first consumer purchaser. This warranty shall not apply to defects or damage arising for any of the following:

1. Accidents, abuse or misuse;
2. Exposure to extreme temperature;
3. Improper fabrication or installation; or
4. Improper maintenance.

NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE MADE. UNDER NO CIRCUMSTANCES SHALL WILSONART INTERNATIONAL, INC. BE LIABLE FOR ANY LOSS OR DAMAGE ARISING FROM THE PURCHASE, USE OR INABILITY TO USE THIS PRODUCT, OR FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES. NO FABRICATOR, INSTALLER, DEALER AGENT OR EMPLOYEE OF WILSONART INTERNATIONAL, INC. HAS THE AUTHORITY TO MODIFY THE OBLIGATIONS OR LIMITATIONS OF THIS WARRANTY.

This warranty gives you specific legal rights, and you also may have other rights that vary from state to state; therefore, some of the limitations stated above may not apply to you. It is to your benefit to save your documentation upon purchase of a product.

Maintenance*

The decorative surface may be cleaned with warm water and mild soaps, such as those used for hands or dishes. Do not use cleansers that contain abrasives, acids or alkalis; they will damage the decorative surface. Remove stubborn stains with a 2-minute exposure to hypochlorite bleach such as Clorox®, followed by a clean water rinse.

We recommend that you **not** allow any of the following agents to **remain** in contact with the decorative surface:

1. Hypochlorite bleach, except as described above
2. Hydrogen peroxide solution
3. Mineral acids, hydrochloric acid such as Lime-A-Way™, sulfuric or nitric acid
4. Caustic solutions containing greater than 2% lye, such as Drano®
5. Sodium bisulfate, such as Sani-Flush®
6. Potassium permanganate
7. Berry juices
8. Silver nitrate, in 1% concentration or greater
9. Gentian violet
10. Mild silver protein, such as 20% argyrol
11. Bluing
12. Fabric dye, such as Tintex® or Rit®
13. Alcohol containing 1% iodine in solution

If you require a decorative laminate that can withstand these and other chemicals, please refer to the Tech Data for Wilsonart® Chemsurf® Chemical-Resistant Laminates.

Free copies of the “Care and Maintenance Guide,” which covers all Wilsonart products, are available. The guide can be accessed at http://www.wilsonartlaminate.com or by calling our hotline at 800-433-3222. It can be used for your own information, for project manuals, and for provision to clients and contractors involved with interior construction and finishing.

**Not applicable for Phenolic Laminate Backing Sheet.*

Technical Services

For samples, literature, questions or technical assistance, please contact our toll-free Hotline at (800) 433-3222, Monday through Friday, 7 am – 7 pm, CST.

Specification Form:
Surface shall be Wilsonart® Laminate,
produced by Wilsonart International, Inc.,
Temple, Texas 76503-6110

Type: Specify 107, 335 or 350

Surface
- Color Number: _____
- Color Name: _____

Finish
- Number: _____
- Name: _____

Edge Trim
- Color Number: _____
- Color Name: _____

Adhesive
- Name: _____
- Grade/Type: _____
- Brand: Wilsonart Adhesive

Basic Types TD (TD2200)
Revised: August 24, 2005