

# Wilsonart® HD™ High Definition™ Laminate

## Technical Data

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### Manufacturer

Wilsonart International, Inc.  
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P.O. Box 6110  
Temple, Texas 76503-6110  
Phone: (254) 207-7000; (800) 433-3222  
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Web Site: www.wilsonartlaminates.com

### Product Description

#### Recommended Uses

Wilsonart® HD™ High Definition™ Laminate is suitable for use on high quality residential and commercial countertops, furniture, fixtures and casework.

- **High Definition Type HGP 376** is used for work surfaces on counters, islands, vanities, desks and tables. Type 376 is made for both horizontal and vertical interior applications where the surface must be functional, durable and decorative. Type 376 may be postformed to eliminate seams for a more attractive edge.
- **High Definition Type VGP 366** is used for work surfaces on counters, islands, vanities, desks and tables. Type 366 is made for both horizontal and vertical interior applications where the surface must be functional, durable and decorative. Type 366 may be postformed to eliminate seams for a more attractive edge.

#### 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® HD™ High Definition™ 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® HD™ High Definition™ 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 following patterns only. Please see actual sample before specifying.

1827-35	Metallic Bronze	1842-45	Canyon Passage
1828-35	Metallic Steel	1841-45	Desert Passage
1829-35	Metallic Silver	1836-45	Crystalline Ice
1831-35	Raven Gemstone	1837-45	Crystalline Pearl
1830-35	Mystic Gemstone	1834-45	Crystalline Shell
1832-35	River Gemstone	1838-45	Crystalline Dune
1843-45	Mountain Passage	1839-45	Crystalline Braun
1844-45	Alpine Passage	1840-45	Crystalline Iris
1845-45	Night Passage	1835-45	Crystalline Onyx

1821-35	Bella Reale	1813-35	Deepstar Glaze
1820-35	Bella Noche	1812-35	Deepstar Fossil
1819-35	Bella Venito	1814-35	Deepstar Bronze
1822-35	Bella Capri	1815-35	Deepstar Agate
1824-35	Sedona Bluff	1816-35	Deepstar Jade
1825-35	Sedona Spa	1811-35	Deepstar Flint
1823-35	Sedona Spirit	1818-35	Deepstar Slate
1826-35	Sedona Trail	1817-35	Deepstar Mineral

### Finishes

#### ❖ #35 Mirage

Subtle variations in matte and gloss finish connect to nature's own finishes: rough and weathered, smooth and polished. This finish is exclusive to Wilsonart HD High Definition Laminate and is not available in other designs or product types. *Glossometer reading: 50± 20.*

#### ❖ #45 Facet

A medium to small scale texture providing an optical surface effect that adds dimension and depth to laminate. It is comprised of a balance of matte and gloss areas. The angular, faceted, textural characteristics connect it to the stone and quartz-like visuals it was designed for. *Glossometer reading: MD and CD 50 ± 20*

*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.*

### Standard Sheet Sizes

- 48" (1219mm) x 96" (2438mm)
- 60" (1524mm) x 96" (2438mm)
- 60" (1524mm) x 120" (3048mm)
- 60" (1524mm) x 144" (3658mm)

### Thickness and Weight

Description	366	376
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#

### Technical Data

#### Physical Properties of High Definition Laminate 376

NEMA Test	Typical Wilsonart Type 376	NEMA Standard HGP
Thickness	<b>0.039" ± 0.005"</b> <b>(0.99mm ± 0.13mm)</b>	0.039" ± 0.005" (1mm ± 0.12mm)
Appearance	<b>No ABC def.</b>	No ABC def.
Light Resistance	<b>Slight effect</b>	Slight effect
Cleanability (cycles)	<b>10</b>	20 (max.)
Stain Resistance		
Reagents 1-10	<b>No effect</b>	No effect
Reagents 11-15	<b>Slight effect</b>	Moderate effect
Boiling Water Resistance	<b>No effect</b>	Slight effect
High Temperature Resistance	<b>Slight effect</b>	Slight effect
Impact Resistance	<b>55" (1397mm)</b>	30" (762mm) (min.)
Radiant Heat Resistance	<b>140 seconds</b>	100 sec. (min.)
Dimensional Stability		
Machine Direction	<b>0.5%</b>	1.1% (max.)
Cross Direction	<b>0.8%</b>	1.4% (max.)

Surface Wear Resistance (cycles)	<b>1200</b>	400 (min.)
Formability*	<b>*9/16" face (14.28mm) *3/16" back (4.76mm)</b>	*5/8" face (16.00mm)
Blistering	<b>70 seconds</b>	55 seconds

**Physical Properties of High Definition Laminate 366**

<b>NEMA Test</b>	<b>Typical Wilsonart Type 366</b>	<b>NEMA Standard VGP</b>
Thickness	<b>0.028" + 0.001 - 0.004" (0.7mm + 0.03 – 0.10mm)</b>	0.028" ± 0.004" (7mm ± 0.10mm)
Appearance	<b>No ABC def.</b>	No ABC def.
Light Resistance	<b>Slight effect</b>	Slight effect
Cleanability (cycles)	<b>10</b>	20 (max.)
Stain Resistance Reagents 1-10 Reagents 11-15	<b>No effect Slight effect</b>	No effect Moderate effect
Boiling Water Resistance	<b>No effect</b>	Slight effect
High Temperature Resistance	<b>Slight effect</b>	Slight effect
Impact Resistance	<b>40" (1016mm)</b>	20" (508mm) (min.)
Radiant Heat Resistance	<b>120 seconds</b>	80 sec. (min.)
Dimensional Stability Machine Direction Cross Direction	<b>0.5% 0.8%</b>	1.1% (max.) 1.4% (max.)
Surface Wear Resistance (cycles)	<b>1600</b>	400 (min.)
Formability*	<b>7/16" face (14.28mm)</b>	1/2" radius (13.00mm)
Blistering	<b>45 seconds</b>	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.

**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® HD™ High Definition™ Laminate, averaged from two specific tests:

**Typical Flame Spread and Smoke Developed Properties 376**

<b>Product Type</b>	<b>Test Condition</b>	<b>Flame Spread</b>	<b>Smoke Developed</b>
<b>Postforming Type 376</b>	Unbonded	60	35
<b>Postforming Type 376</b>	Bonded with contact adhesive to particleboard substrate; 3/8"	50	140

**Typical Flame Spread and Smoke Developed Properties 366**

Product Type	Test Condition	Flame Spread	Smoke Developed
<b>Postforming Type 366</b>	Unbonded	45	40
<b>Postforming Type 366</b>	Bonded with contact adhesive to particleboard substrate; 3/8"	40	155

When you wish to specify decorative laminate for a Class I or A fire rating, please refer to the Fire-Rated or Metal Core 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® HD™ High Definition™ Laminate conforms to the voluntary standards of the American National Standards Institute/National Electrical Manufacturers Association (ANSI/NEMA) LD 3-2005, for thickness, performance properties and appearance. Wilsonart HD High Definition Laminate meets or exceeds 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 all Wilsonart Laminate. Wilsonart Laminate products have been tested under the stringent GREENGUARD Standards for low-emitting materials. All 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).

**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, 350 366 and 376 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, 350 366 and 376, comply.

U.S. Federal Motor Vehicle Safety Standard (FMVSS) 302, “Flammability of Interior Materials.” Basic Types 107, 335, 350 366 and 376 comply.

## **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® HD™ High Definition™ 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 Definition laminates 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 appropriate acclimation has taken place with 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® HD™ Type 376 and 366 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.

## **Warranty**

Wilsonart International warrants that, under normal use and service, the material and workmanship of its laminate shall conform to the standards set forth on the applicable technical data sheets for a period of one (1) year from the date of sale to the first consumer purchaser. Dealers and distributors are provided with the technical data sheets which contain specific standards of performance for the products.

In the event that a laminate product does not perform as warranted, the first consumer purchaser's sole remedy shall be limited to repair or replacement of all or any part of the product which 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, humidity or intense, continuous, direct sunlight.

3. Improper fabrication or installation; or
4. Improper maintenance.

NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE MADE, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. 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® HD™ High Definition™ Laminate,  
produced by Wilsonart International, Inc.,  
Temple, Texas 76503-6110

Type: 366 or 376

Surface

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

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

Finish

Number: 35 or 45

Name: Mirage or Facet

Edge Trim

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

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

Adhesive

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

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

Brand: Wilsonart Adhesive

Wilsonart® HD™ Technical Data (TD0418)

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