

1. Manufacturer

Wilsonart LLC
2501 Wilsonart Drive
P.O. Box 6110
Temple, Texas 76503-6110
Phone: (254) 207-7000; (800) 433-3222
Fax: (254) 207-2384
Website: www.wilsonart.com

2. Product Description

Recommended Uses

Compact Laminate is a high pressure solid composite designed for laboratory work surfaces, toilet partitions, wall panels, fume hood decks, fume hood liner panels, pegboards (drying racks), reagent racks, commercial countertops, cabinet drawer fronts, locker drawers, shelving, window sills, decorative casework components and other interior applications. Compact Laminate provides superior impact, fire-rated, chemical and stain resistance.

Classic Grade – Melamine surface designed for vertical or horizontal applications and casework. Class B/ 2 Fire Rating. Thickness range 1/10” to 1”

Fire-Rated Grade – Fire retardant properties, required by building codes, e.g., elevator cabs, stairwells, and hospitals. Suitable for all segments within the transportation industry. Class A/ 1 Fire Rating. Thickness range - ¼” to 1”. *Fire-Rated Compact Laminate is produced with a black center core, with a brown color line under the decorative layer.*

Laboratory Grade – Thick panels engineered to resist a variety of acids, solvents, general reagents and cleaning agents. Thickness range - ¼” to 1” Laboratory Grade panels are guaranteed good one side only.

Solid Phenolic Backer – Non decorative material used for panels that require impact resistance. Thickness range- 1/8” to 1”.

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).

Basic Limitations

Classic Grade, Fire-Rated and Laboratory Grade panels offer special protection for many work surface applications. These product types are designed for interior applications. However, no one material is suitable for all possible conditions; its properties should be checked for suitability under the specific conditions of each application. The information provided herein is not intended for or to guarantee specific properties.

Patterns & Colors

See all patterns and colors at www.wilsonart.com. Please see actual sample before specifying. Some Compact product types are available in limited designs only. Reference the chart on page 2.

Finishes

60 Finish – A fine matte texture with a slight sheen. (Standard). *Surface gloss value: Nominal Glossometer Reading = 10*

38 Finish – Fine Velvet Texture, moderate reflective value. *Nominal Glossometer Reading = 14*

74 Finish – Wood ticking with a low luster. *Nominal Glossometer Reading = 17*

95 Finish – A matte texture designation for chemical resistant only. *Nominal Glossometer Reading = 20*

96 Finish – Electron beam surface. *Nominal Glossometer Reading = 13*

Finish	Compact Grade Available	Minimum	Special Requirements	Sheet Sizes
60	Classic, Fire-Rated	1 sheet	n/a	4' x 8', 4' x 10', 5' x 8', 5' x 10', 5' x 12'
38	Classic	16 sheets	Designs standard in this finish only.	4' x 8', 5' x 10', 5' x 12'
74	Classic	16 sheets	Woodgrains and Solids only	4' x 8'
95	Laboratory	1 sheet	Available in all Designs for Compact Laminate	4' x 8', 4' x 10', 5' x 8', 5' x 10', 5' x 12'
96	Laboratory	1 sheet	Designs: Black (EB101), Grey (EB102), White (EB103)	4' x 8', 4' x 10', 5' x 8', 5' x 10', 5' x 12'
n/a	Phenolic Backers	n/a	Backers are produced with a slight texture and mottled black appearance. A slight color difference can exist between sheets.	4' x 8', 4' x 10', 5' x 8', 5' x 10', 5' x 12'

Nominal Panel Thicknesses*, Compact Laminate

Product Type	Compact Grade	Imperial Measure (Inches)	Description	Metric Measure (Mm)	Thickness Tolerance	Lbs/Sq.Ft
114	Classic	1/10" (0.100")	Sanded One Side	2.54 mm	±0.012" (0.30mm)	0.745
117	Classic	0.118"	Sanded One Side	3.00 mm	±0.012" (0.30mm)	0.886
514	Classic	1/10" (0.100")	Double Faced	2.54 mm	±0.012" (0.30mm)	0.745
515	Classic	1/8" (0.125")	Double Faced	3.17 mm	±0.012" (0.30mm)	0.895
569	Classic	1/4" (0.250")	Double Faced	6.35 mm	± 0.012" (0.30mm)	1.81
571	Classic	5/16" (0.312")	Double Faced	7.92 mm	± 0.015" (0.38mm)	2.26
572	Classic	3/8" (0.375")	Double Faced	9.52 mm	± 0.019" (0.48mm)	2.72
568	Classic	1/2" (0.500")	Double Faced	12.7 mm	± 0.025" (0.64mm)	3.62
575	Classic	3/4" (0.750")	Double Faced	19.0 mm	± 0.037" (0.94mm)	5.40
590	Classic	1" (1.00")	Double Faced	25.4 mm	± 0.050" (1.27mm)	7.24
669	Fire-Rated	1/4" (0.250")	Double Faced	6.35 mm	± 0.0125" (0.32mm)	1.81
671	Fire-Rated	5/16" (0.312")	Double Faced	7.92 mm	± 0.0156" (0.40mm)	2.26
672	Fire-Rated	3/8" (0.375")	Double Faced	9.52 mm	± 0.0187" (0.47mm)	2.72
668	Fire-Rated	1/2" (0.500")	Double Faced	12.7 mm	± 0.025" (0.64mm)	3.62
675	Fire-Rated	3/4" (0.750")	Double Faced	19.0 mm	± 0.037" (0.94mm)	5.40
690	Fire-Rated	1" (1.00")	Double Faced	25.4 mm	± 0.050" (1.27mm)	7.24
569-95	Laboratory	1/4" (0.250")	Double Faced	6.35 mm	± 0.0125" (0.32mm)	1.81
571-95	Laboratory	5/16" (0.312")	Double Faced	7.92 mm	± 0.0156" (0.40mm)	2.26
572-95	Laboratory	3/8" (0.375")	Double Faced	9.52 mm	± 0.0187" (0.47mm)	2.72
568-95	Laboratory	1/2" (0.500")	Double Faced	12.7 mm	± 0.025" (0.64mm)	3.62
575-95	Laboratory	3/4" (0.750")	Double Faced	19.0 mm	± 0.037" (0.94mm)	5.40
590-95	Laboratory	1" (1.00")	Double Faced	25.4 mm	± 0.050" (1.27mm)	7.24
298	Phenolic Backer	1/8" (0.125")	Double Faced	3.17 mm	±0.012" (0.30mm)	0.895
269	Phenolic Backer	1/4" (0.250")	Double Faced	6.35 mm	± 0.0125" (0.32mm)	1.81
271	Phenolic Backer	5/16" (0.312")	Double Faced	7.92 mm	± 0.0156" (0.40mm)	2.26
272	Phenolic Backer	3/8" (0.375")	Double Faced	9.52 mm	± 0.0187" (0.47mm)	2.72
268	Phenolic Backer	1/2" (0.500")	Double Faced	12.7 mm	± 0.025" (0.64mm)	3.62
275	Phenolic Backer	3/4" (0.750")	Double Faced	19.0 mm	± 0.037" (0.94mm)	5.40
290	Phenolic Backer	1" (1.00")	Double Faced	25.4 mm	± 0.050" (1.27mm)	7.24

*Note: thickness tolerance according to NEMA LD3-2005 and ISO 4586-4 for Compact Laminate grade (CGS)

Standard Panel Sizes, Compact Laminate

Compact Grade	Imperial Measure (Feet)	Metric measure (mm)	Finish Availability
Classic	4' x 8'	1220 mm x 2440 mm	38, 60, 74
Classic	4' x 10'	1220 mm x 3050 mm	60
Classic	5' x 8'	1525 mm x 2440 mm	60
Classic	5' x 10'	1525 mm x 3050 mm	38, 60
Classic	5' x 12'	1525 mm x 3660 mm	38, 60
Fire-Rated	4' x 8'	1220 mm x 2440 mm	60
Fire-Rated	4' x 10'	1220 mm x 3050 mm	60
Fire-Rated	5' x 8'	1525 mm x 2440 mm	60
Fire-Rated	5' x 10'	1525 mm x 3050 mm	60
Fire-Rated	5' x 12'	1525 mm x 3660 mm	60
Laboratory	4' x 8'	1220 mm x 2440 mm	95, 96
Laboratory	4' x 10'	1220 mm x 3050 mm	95, 96
Laboratory	5' x 8'	1525 mm x 2440 mm	95, 96
Laboratory	5' x 10'	1525 mm x 3050 mm	95, 96
Laboratory	5' x 12'	1525 mm x 3660 mm	95, 96
Phenolic Backer	4' x 8'	1220 mm x 2440 mm	Backers are produced with a slight texture and mottled black appearance.
Phenolic Backer	4' x 10'	1220 mm x 3050 mm	Backers are produced with a slight texture and mottled black appearance.
Phenolic Backer	5' x 8'	1525 mm x 2440 mm	Backers are produced with a slight texture and mottled black appearance.
Phenolic Backer	5' x 10'	1525 mm x 3050 mm	Backers are produced with a slight texture and mottled black appearance.
Phenolic Backer	5' x 12'	1525 mm x 3660 mm	Backers are produced with a slight texture and mottled black appearance.

3. Physical Properties

Sample	Test Method	Units	Scale	Wilsonart Standard Grade	Wilsonart Lab Grade 95	Wilsonart Lab Grade 96
SEFA 3 stain (24 hr. stain)	SEFA 3	Pass/Fail	Pass/Fail	Pass	Pass	Pass
Number of Level 3 effects	SEFA 3	Numerical Rating	Maximum of 4 level 3	3	0	0
Scratch resistance	EN438-2:25	N	1 to 5 (5 best)	>5	≥4	≥5
Resistance to Wear	EN438-2:10	Cycles	Cycles	≥390	≥450	≥400
Resistance to Impact	EN438-2:21	Indentation diameter, mm	Max of 10mm	0	0	0
		Height, mm	Measurement of distance	1800	1800	>1800
Resistance to Dry Heat	EN438-2:16	Rating (min)	1 to 5 (5 best)	≥4	≥2	≥5
Resistance to Wet Heat	EN12721	Rating (min)	1 to 5 (5 best)	≥5	≥3	≥5
Boiling Water Immersion	EN438-2:12	Appearance	1 to 5 (5 best)	≥5	≥2	≥5
Dimensional Stability	EN438-2:17	Cumulative change (%)	Percent Change	≤0.15	≤0.1	≤0.1
Resistance to Water Vapor	EN438-2:14	Rating	1 to 5 (5 best)	≥4	≥3	≥5
Resistance to Cigarette Burn	EN438-2:30	Rating	1 to 5 (5 best)	≥4	≥5	≥5
Resistance to Crazeing	EN438-2:24	Grade	1 to 5 (5 best)	≥5	≥5	≥5
Modulus of Elasticity	EN ISO 178/ASTM 638-08	Mpa	>11000	≥12000	≥15,000	≥12,000

Modulus of Elasticity	EN ISO 178/ASTM 638-09	psi	> 1,400,000	>1,800,000	>2,200,000	>1,776,000
Flexural Strength (MD)	EN ISO 178/ASTM 790-07	Mpa	> 114.0	≥177	≥150	≥210
Flexural Strength (CD)	EN ISO 178/ASTM 790-08	Mpa	>82.7	≥120	≥120	≥170
Tensile Strength (MD)	EN ISO 527-2/ASTM 638-08	Mpa	> 114.0	≥145	≥150	≥230
Tensile Strength (CD)	EN438-2:25	Mpa	>82.7	≥99	≥150	≥140
Density	EN ISO 1183/ASTM 792-08	g/cm2		1.39	> 1.34	> 1.34
Light Fastness	EN438-2:27	Blue wool scale	Min of 4 to 5	≥6	> 5	> 6
NEMA 3.3	Light Resistance	Slight Effect	Visual	Slight Effect	Slight Effect	Slight Effect
NEMA 3.4	Cleanability	20 Max Rating	Visual	20	20	20
NEMA 3.4	Stains 1-10	No Effect	Visual	No Effect	No Effect	No Effect
NEMA 3.4	Stains 11-15	Moderate Effect	Visual	Moderate Effect	No Effect	No Effect
NEMA 3.5	Boiling Water Resistance	Rating (min)	Visual	No Effect	No Effect	No Effect
NEMA 3.6	High Temperature Resistance	Rating (min)	Visual	Slight Effect	No Effect	No Effect
NEMA 3.8	Ball Impact Resistance	Height, Inches	Visual	1/4" ≥ 130"	1/4" ≥ 130"	1/4" ≥ 130"
				1/2" ≥ 180"	1/2" ≥ 180"	1/2" ≥ 180"
				3/4" ≥ 180"	3/4" ≥ 180"	3/4" ≥ 180"
NEMA 3.10	Radiant Heat Resistance	Seconds	Visual	≥ 100	≥ 100	≥ 100
NEMA 3.11	Dimensional Change MD	% MD Max	% Change	0.3	0.3	0.3
	Dimensional Change CD	% CD Max	% Change	0.7	0.7	0.7
NEMA 3.13	Wear Resistance	Revolutions	Min Value 400	≥ 400	≥ 400	≥ 400
Fire Properties	ASTM E-84			Class B	Class C	1" = Class B
Warpage		On products >3/8"	Maximum of 1/4"	Maximum of 1/4"	Maximum of 1/4"	Maximum of 1/4"
Screw Hold Strength	1/4"	Pounds (N)		≥ 500 (≥2000)	≥ 500 (≥2000)	≥ 500 (≥2000)
	3/8"	Pounds (N)		≥ 900 (≥4000)	≥ 900 (≥4000)	≥ 900 (≥4000)
	1/2"	Pounds (N)		≥ 1300 (≥5000)	≥ 1300 (≥5000)	≥ 1300 (≥5000)
	3/4"	Pounds (N)		≥ 1900 (≥8000)	≥ 1900 (≥8000)	≥ 1900 (≥8000)
	1"	Pounds (N)		≥ 2000 (≥8500)	≥ 2000 (≥8500)	≥ 2000 (≥8500)

Note: All SEFA and EN438 testing were performed on Compact laminate with a black decorative surface

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.

Fire Test Information for Classic Grade Compact (ASTM E84)

Thickness	Flame Spread	Smoke Development
¼" to 1"	55 - 60	165 -250

Fire Test Information for Fire-Rated Compact (ASTM E84)

Testing Company	Thickness	Flame Spread	Smoke Development
U.L.	¼" to 1"	15	110-165

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

SEFA 8 Test Results - See [Technical Data Sheet for Laboratory Grade](#) products.

NSF International (NSF) #35 "Laminated Plastic for Surfacing for Food Service Equipment." All solid colors and printed patterns in product types 514, 515, 568, 569, 572, 575, 590, 668, 669, 672, 675 and 690 comply.

Core Color

Classic Grade, Fire-Rated and Laboratory Grade panels are produced with a black core as the standard offering in ¼" to 1" thicknesses. Product 117 is produced with a brown core except when ordered with a black melamine face.

4. Fabrication

Compact Laminate panels can be cut, drilled and machined using standard wood-working equipment fitted with carbide cutting edges. Rough cuts can be made with carbide tip blades typically 62 tooth or greater on a table saw or Kane saw.

To achieve a clean edge, routers with ¼" or ½" shaft, with 2 flute carbide blades can be used to remove rough edges. CNC routers typically will run at 10,000 to 18000 RPM's at 150 to 900 inches per minute. (Dependent on thickness of panel and type of cut). It is common to run 10,000 RPM's at 200 inches per min on ½" and ¾" material.

Final sanding, of the edge, can be achieved with an orbital sander

Matte Finish	Satin Finish	Semi-Gloss Finish
100u	100u	100u
80u	80u	80u
60u	60u	60u
	1000 Mirka Abralon	1000 Mirka Abralon
		2000 Mirka Abralon

Post-Forming

Products 514 and 515 have the ability to be post-formed. These two products can be placed in a convection oven and heated to 325° F. Once removed, they are placed in a mold and cooled to room temperature. The minimum bend, is a 12" inside radius.

Installation

Generally, the principles applicable to the installation of decorative laminate work, will also apply to the installation of Compact Laminate panels.

Surface mounted objects should be secured into the face or back of the laminate using self-tapping screws in pre-drilled holes. IMPORTANT NOTE: Care needs to be taken when screwing into the edge of the Compact Laminate. Using the appropriate drill diameter and screw size/quality is important. Leveling at joints can be done using shims on the underside if necessary. Metal brackets or retaining clips are recommended for securing the laminate panels together, and to abutting surfaces. To secure counters to cabinets and provide liquid proof butt joints, a two part epoxy, and two part urethane or silicone sealant can be used.

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.

Wilsonart® Compact Laminate Technical Data
Classic, Fire-Rated, and Laboratory Grades
Compact Solid Phenolic Backers
Revised: April 20, 2018
© 1998-2018, Wilsonart LLC