



## LAB GRADE PRODUCT TECHNICAL DATA

### Product Description

Wilsonart produces laboratory grade products in multiple thicknesses depending on the use and application. Wilsonart products are both decorative and functional and designed for vertical and horizontal applications. Our laminate materials offer LEED contributions, are SEFA tested and Greenguard Gold certified.

Wilsonart lab grade products are available in the following product types.

- 1) **Classic Grade Compact** – Melamine surface designed for vertical or horizontal applications. Designed for general applications such as shelving, technical stations and light-duty work surfaces. Class B/ 2 Fire Rating.
- 2) **Laboratory Grade 95**– Thick panels engineered to resist a variety of acids, solvents, general reagents and cleaning agents. Designed for both vertical and horizontal applications. Available in over 220 designs.
- 3) **Laboratory Grade 96** – Thick panels engineered to resist a variety of acids, solvents, general reagents and cleaning agents. An electron beam cured acrylic resin, that increases scratch resistance on the surface. Designed for both vertical and horizontal applications. Available in three designs, Black (EB101), Grey (EB102) and White (EB103).

#### **Limitations:**

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. All lab grade products are produced as double faced. They are sold as good one side.

#### **Core Color**

Classic Grade, Laboratory Grade 95 and Laboratory Grade 96 panels are produced with a black core in ¼” to 1” thicknesses.

#### **Deco Color Selection**

Over 220 designs available. Refer to the Compact Laminate brochure or the web site for a complete list of the color selections. Laboratory Grade 96 is available in EB101 (Black), EB102 (Grey) and EB103 (White).

**Nominal Sheet and Panel Thickness:**

Imperial Measure (In.)	Description	Product Type	Metric Measure (Mm)	Thickness Tolerance	Lbs/Sq.Ft
1/4" (0.250")	Double Faced	569	6.4 mm	± 0.0125"	1.81
5/16" (0.312")	Double Faced	571	7.93 mm	± 0.0156"	2.26
3/8" (0.375")	Double Faced	572	9.6 mm	± 0.0187"	2.72
1/2" (0.500")	Double Faced	568	12.7 mm	± 0.025"	3.62
3/4" (0.750")	Double Faced	575	19.0 mm	± 0.037"	5.40
1" (1.00")	Double Faced	590	25.4 mm	± 0.050"	7.24

*Note: thickness tolerance according to NEMA LD3-2005*

TEXTURE ON ALL PRODUCT TYPES	MIN ORDER QTY
60 Finish – A fine matte texture with a slight sheen Glossometer reading: MD and CD 16 ± 2.	1 sheet min
95 Finish – A fine matte texture with a slight sheen Glossometer reading: MD and CD 20 ± 4.	1 sheet min
96 Finish – A fine matte texture with a slight sheen Glossometer reading: MD and CD 12 ± 4.	1 sheet min

**Care and Maintenance:**

To clean the laminate surfaces, simply wipe with a soft damp cloth and mild detergent; then rinse thoroughly with warm water and wipe dry. For stubborn stains, use an all-purpose cleaner, with a damp cloth; then rinse thoroughly with warm water and wipe dry. Long exposure to harsh reagents can damage the surface.

**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).

**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. 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, two part urethane or silicone sealant can be used.

# 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
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
CD	EN438-2:25	Mpa	>82.7	≥99	≥150	≥140
Density	EN ISO 1183/ASTM 792-08	g/cm <sup>2</sup>		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
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		Pounds (N)		≥500 (≥2000)	≥500 (≥2000)	≥500 (≥2000)
		Pounds (N)		≥900 (≥4000)	≥900 (≥4000)	≥900 (≥4000)
		Pounds (N)		≥1300 (≥5000)	≥1300 (≥5000)	≥1300 (≥5000)
		Pounds (N)		≥1900 (≥8000)	≥1900 (≥8000)	≥1900 (≥8000)
		Pounds (N)		≥2000 (≥8500)	≥2000 (≥8500)	≥2000 (≥8500)

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

# SEFA 3 Test Results

SEFA Rating Scale	Description		
0	No detectable Change		
1	Slight Change in color or gloss		
2	Slight Surface etching or severe staining		
3	Pitting, cratering, swelling, erosion of coating, obvious & significant deterioration		

  

Sample	Wilsonart Standard Grade	Wilsonart Lab Grade 95	Wilsonart Lab Grade 96
Pass/Fail	Pass	Pass	Pass
# of Severe Stains (3)	3	0	0
Amyl Acetate	0	0	0
Ethyl Acetate	1	1	1
Acetic Acid 89%	0	0	1
Acetone	1	1	1
Acid Dichromate, 5%	2	0	1
Butyl Alcohol	0	0	0
Ethyl Alcohol	0	0	0
Methyl Alcohol	0	0	0
Ammonium Hydroxide, 28%	0	1	0
Benzene	0	1	1
Carbon Tetrachloride	0	0	1
Chloroform	1	1	0
Chromic Acid, 60%	1	1	0
Cresol	0	1	1
Dichloroacetic Acid	1	1	1
Dimethyl Formamide	0	1	1
Dioxane	0	1	1
Ethyl Ether	0	0	1
Formaldehyde, 37%	0	0	0
Formic Acid, 90%	2	1	1
Furfural	0	1	1
Gasoline	0	0	0
Hydrochloric Acid, 37%	2	0	0
Hydrofluoric Acid, 48%	2	1	1
Hydrogen Peroxide, 30%*	2	0	0
Tincture of Iodine	0	0	0
Methyl Ethyl Ketone	1	0	0
Methylene Chloride	1	1	0
Monochlorobenzene	0	0	1
Naphthalene	0	0	0
Nitric Acid, 20%	3	0	0
Nitric Acid, 30%	3	0	0
Nitric Acid, 70%	3	1	0
Phenol, 90%	1	1	0
Phosphoric Acid, 85%	2	0	0
Silver Nitrate, Saturated**	1	0	0
Sodium Hydroxide, 10%	1	0	0
Sodium Hydroxide, 20%	1	0	0
Sodium Hydroxide, 40%	1	1	1
Sodium Hydroxide, Flake	1	1	1
Saturated Sodium Sulfide	0	1	0
Sulfuric Acid, 33%	2	0	0
Sulfuric Acid, 77%	2	1	1
Sulfuric Acid, 96%	2	1	1
Equal Nitric and Sulfuric Acids	2	1	1
Toluene	0	0	1
Trichloroethane	1	1	0
Xylene	0	1	0
Saturated Zinc Chloride	0	0	0

Note: The color of the samples tested were black

### **Samples**

Individual 4"x4" samples can be obtained of the three Lab Grade 96 products.

MC-4x4PCEB101 – LAB GRADE EB101 Black

MC-4x4PCEB102 – LAB GRADE EB102 Grey

MC-4x4PCEB103 – LAB GRADE EB103 White

### **Wilsonart Compact Laminate Limited Warranty**

Wilsonart International, warrants that, under normal use and service, the material and workmanship of its products 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 original 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 Wilsonart 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 which is defective, at the manufacturer's sole discretion.

This warranty applies only to product:

1. In its original installation,
2. Purchased by the original purchaser: and
3. With original invoice.

This warranty shall not apply to defects or damage arising from any of the following:

1. Accidents, abuse or misuse;
2. Exposure to extreme temperature and/or humidity;
3. Improper fabrication or installation; or
4. Improper maintenance.
5. Exterior applications.

**NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE MADE. UNDER NO CIRCUMSTANCES SHALL THE MANUFACTURER 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, HAS THE AUTHORITY TO MODIFY THE OBLIGATIONS OR LIMITATION OF THIS WARRANTY.**

**This warranty gives you specific legal rights, and you may also have other rights which 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.**

### **Manufacturer:**

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