

---

WEAVING  
EXCELLENCE  
WITH  
INNOVATION



SHEERWEAVE

BY PHIFER







## AN INTRODUCTION

SheerWeave® interior sun control fabrics provide the perfect balance of light, comfort and beauty, making them the ideal window covering solution for residential and commercial spaces alike. A sleek and functional alternative to ordinary window coverings, SheerWeave effortlessly and elegantly manages the sun's harsh heat and blinding glare.

### **MULTI-FUNCTIONAL**

SheerWeave filters and diffuses light while reducing glare and solar heat gain, conserving energy and helping to create a more comfortable environment. SheerWeave also helps reduce the fading of interior furnishings and flooring by protecting these surfaces from the sun's harmful effects. And unlike many window treatments, SheerWeave allows excellent outward visibility – even when shades are lowered – to maintain optimal views.

### **UNMATCHED STYLE**

From modern, neutral hues to subtly-textured, organic weaves in warm earth tones, these fabrics are the perfect complement to any interior design scheme. SheerWeave fabrics are also available in a variety of openness factors ranging from one to 25 percent and wide widths to cover large window openings. Simple, clean and classic, SheerWeave can be fabricated into many different types of window treatments, and the aesthetic quality of these fabrics allows them to easily pair with other draperies and window coverings.

### **QUALITY SECOND TO NONE**

Phifer's quality standards are among the highest in the world. SheerWeave fabrics are manufactured in our state-of-the-art facility in Tuscaloosa, Alabama USA under strict guidelines through ISO-certified production processes. From yarn coating to packaging, every step of the production process is checked to ensure only the finest quality fabrics are given the SheerWeave name.

### **ENVIRONMENTALLY RESPONSIBLE**

At Phifer, we're committed to minimizing the impact on the environment from our manufacturing processes and finished products and incorporating environmental stewardship with our corporate goals...and yours. We use a solutions-oriented approach as we partner with individuals, businesses, the architectural and design communities and governmental agencies to achieve their individual goals of energy conservation and environmental preservation.

Phifer is the world's leader in the manufacture and sale of energy-saving sun control fabrics for both the residential and commercial markets.





## INTRODUCTION TO SHADING

Spanning more than 30 collections in a palette of colors, weaves and range of openness factors, Phifer's SheerWeave fabric line is sure to have a shading solution to meet your needs. Below are a few principles to consider when choosing the optimal fabric for your next window covering project:

SheerWeave fabrics reduce glare by 70%-100% based on color and openness factor, which are the most important features to consider for energy savings and light management.

### **LIGHT VS. DARK COLORS**

SheerWeave color options range from creamy White and Bone to darker Charcoal and Chestnut tones. These color designations go beyond aesthetics and color coordination with interior décor. Lighter color fabrics provide optimum heat reduction, reflect light and illuminate the interior. Darker fabrics provide a superb view to the outside and reduce glare, making them ideal for viewing computer and television screens.

### **OPENNESS DIFFERENCES**

The openness of a fabric refers to the weave or mesh structure and determines the amount of heat and light that enters a room. Generally, a more open fabric allows more heat and light to penetrate into the room, while tighter meshes block more heat and light. Additionally, more open fabrics help maintain better outward visibility.

SheerWeave fabrics are offered in a variety of openness factors to allow optimal light in commercial buildings or provide more privacy in settings such as healthcare facilities.









## INFINITY<sub>2</sub><sup>®</sup> SUSTAINABLE FABRIC

### AVERAGE OPENNESS 1%, 3% and 5%

SheerWeave Infinity<sub>2</sub> sustainable sun control fabrics are eco-friendly, full basketweaves designed to meet the most stringent environmental design standards. With 100% recycled content, 100% recyclable and a PVC-free composition, Infinity<sub>2</sub> fabrics offer the same solar heat and glare control properties as traditional SheerWeave fabrics for conserving energy, harnessing natural light and maintaining interior comfort levels.

### FIRE CLASSIFICATION

NFPA 701 TM#1 (small scale), NFPA 101 (Class A Rating), CAN/ULC-S 109-03 (large scale), CAN/CGSB2-4.162-M80, BS 5867 Part 2 Type B Performance, and IBC Section 803.1.1 (Class A Rating)

### BACTERIA AND FUNGAL RESISTANCE

ASTM E 2180 and ASTM G21

### ENVIRONMENTAL CERTIFICATION

Certified to GREENGUARD and GREENGUARD Gold standards for low chemical emissions into indoor air during product usage

### LEAD FREE

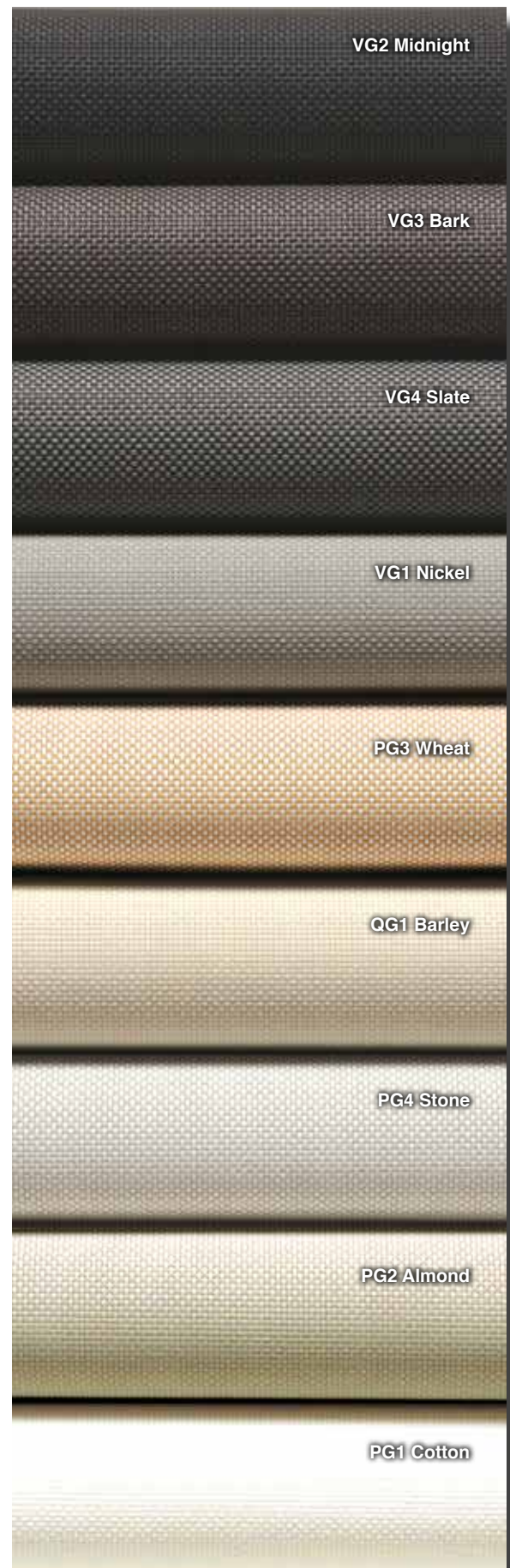
RoHS/Directive 2002/95/EC, US Consumer Product Safety Commission Section 101, ANSI/WCMA A 100.1-2007 for lead content and REACH (EC 1907/2006) compliant

### STANDARD WIDTHS

63" and 98" (160 cm and 248.9 cm)

### STANDARD ROLL LENGTH

30 Linear Yards (27.4 m)









## BASIC

### AVERAGE OPENNESS 3% and 5%

With all the benefits, certifications, and technical specifications you have come to expect, SheerWeave BASIC is uniquely designed for the demanding and competitive commercial market and is an ideal choice for your spec-driven projects. A more robust fiberglass core yarn gives SheerWeave BASIC the added durability high traffic areas and public spaces require. Suitable for all types of interior window shade applications, SheerWeave BASIC is an economical alternative to traditional solar screen fabrics. BASIC 3% has exceptional sound absorbing performance for an added acoustical benefit. SheerWeave BASIC fabrics can also be used in exterior shading systems.

### FIRE CLASSIFICATION

California U.S. Title 19 (small scale), NFPA 701 TM#1 (small scale), NFPA 101 (Class A Rating), IBC Section 803.1.1 (Class A Rating), BS 5867 Part 2 Type B Performance, NFPA 701 TM#2 (large scale), CAN/ULC-S 109-03 (large and small scale), and CAN/CGSB2-4.162-M80

### BACTERIA AND FUNGAL RESISTANCE

ASTM E 2180, ASTM G21, AATCC30 Part 3, ASTM D 3273, GREENGUARD Mold and Bacteria Standard ASTM 6329; includes Microban antimicrobial additives

### ENVIRONMENTAL CERTIFICATION

Certified to GREENGUARD and GREENGUARD Gold standards for low chemical emissions into indoor air during product usage

### LEAD FREE

RoHS/Directive 2002/95/EC, US Consumer Product Safety Commission Section 101, ANSI/WCMA A 100.1-2007 for lead content and REACH (EC 1907/2006) compliant

### ACOUSTICAL PERFORMANCE & VALUE

NRC (Noise Reduction Coefficient) and SAA (Sound Absorption Average) tested in accordance with ASTM C423-09a. BASIC 3%: NRC .60 / SAA .60

### STANDARD WIDTH

98" (248.9 cm)

### STANDARD ROLL LENGTH

30 Linear Yards (27.4 m)











## STYLE 1000

### AVERAGE OPENNESS 25%

This vinyl-coated fiberglass ribbed-weave fabric offers substantial shading and excellent outward visibility with improved daytime privacy. Style 1000 can also be used in exterior shading systems.

### FIRE CLASSIFICATION

California U.S. Title 19 (small scale), NFPA 701 TM#1 (small scale), NFPA 101 (Class A Rating), BS 5867 Part 2 Type B Performance, NFPA 701 TM#2 (large scale), CAN/ULC-S 109-03 (large and small scale) and IBC Section 803.1.1 (Class A Rating)

### BACTERIA AND FUNGAL RESISTANCE

ASTM E 2180, ASTM G21, AATCC30 Part 3, ASTM D 3273, GREENGUARD Mold and Bacteria Standard ASTM 6329; includes Microban antimicrobial additives

### ENVIRONMENTAL CERTIFICATION

Certified to GREENGUARD and GREENGUARD Gold standards for low chemical emissions into indoor air during product usage

### LEAD FREE

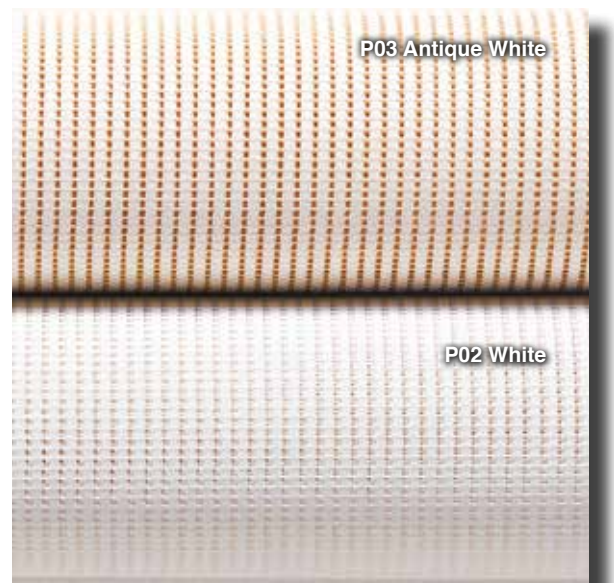
RoHS/Directive 2002/95/EC, US Consumer Product Safety Commission Section 101, ANSI/WCMA A 100.1-2007 for lead content and REACH (EC 1907/2006) compliant

### STANDARD WIDTHS

36", 48", 72", 84" and 96" (91.4 cm, 121.9 cm, 182.9 cm, 213.4 cm and 243.8 cm)

### STANDARD ROLL LENGTH

30 Linear Yards (27.4 m)









## STYLE 2000/2100

### AVERAGE OPENNESS 5% (2000), 10% (2100)

The original SheerWeave fabrics, Styles 2000 and 2100 are vinyl-coated fiberglass basketweaves designed expressly for those applications that require a more opaque and non-directional fabric. Style 2000/2100 can also be used in exterior shading systems.

### FIRE CLASSIFICATION

California U.S. Title 19 (small scale), NFPA 701 TM#1 (small scale), NFPA 101 (Class A Rating), BS 5867 Part 2 Type B Performance, NFPA 701 TM#2 (large scale), CAN/ULC-S 109-03 (large and small scale), CAN/CGSB2-4.162-M80 and IBC Section 803.1.1 (Class A Rating)

### BACTERIA AND FUNGAL RESISTANCE

ASTM E 2180, ASTM G21, AATCC30 Part 3, ASTM D 3273, GREENGUARD Mold and Bacteria Standard ASTM 6329; includes Microban antimicrobial additives

### ENVIRONMENTAL CERTIFICATION

Certified to GREENGUARD and GREENGUARD Gold standards for low chemical emissions into indoor air during product usage

### LEAD FREE

RoHS/Directive 2002/95/EC, US Consumer Product Safety Commission Section 101, ANSI/WCMA A 100.1-2007 for lead content and REACH (EC 1907/2006) compliant

### STANDARD WIDTHS

STYLE 2000: 63", 98" and 126" (160 cm, 248.9 cm and 320 cm)  
STYLE 2100: 63" and 98" (160 cm and 248.9 cm)

### STANDARD ROLL LENGTH

30 Linear Yards (27.4 m)









## STYLE 2500/2410/2390/2360

**AVERAGE OPENNESS 1% (2500), 3% (2410), 5% (2390), 10% (2360)**

Manufactured with ease of fabrication in mind, Styles 2500, 2410, 2390 and 2360 are thin and light weight vinyl-coated fiberglass fabrics woven in a full basketweave construction with four openness factors to meet the broadest range of performance in a non-directional fabric. Style 2500/2410/2390/2360 can also be used in exterior shading systems.

### FIRE CLASSIFICATION

California U.S. Title 19 (small scale), NFPA 701 TM#1 (small scale), NFPA 101 (Class A Rating), BS 5867 Part 2 Type B Performance, NFPA 701 TM#2 (large scale), CAN/ULC-S 109-03 (large and small scale), CAN/CGSB2-4.162-M80 and IBC Section 803.1.1 (Class A Rating)

### BACTERIA AND FUNGAL RESISTANCE

ASTM E 2180, ASTM G21, AATCC30 Part 3, ASTM D 3273, GREENGUARD Mold and Bacteria Standard ASTM 6329; includes Microban antimicrobial additives

### ENVIRONMENTAL CERTIFICATION

Certified to GREENGUARD and GREENGUARD Gold standards for low chemical emissions into indoor air during product usage

### LEAD FREE

RoHS/Directive 2002/95/EC, US Consumer Product Safety Commission Section 101, ANSI/WCMA A 100.1-2007 for lead content and REACH (EC 1907/2006) compliant

### ACOUSTICAL PERFORMANCE & VALUE

NRC (Noise Reduction Coefficient) and SAA (Sound Absorption Average) tested in accordance with ASTM C423-09a. STYLE 2500: NRC .55 / SAA .54

### STANDARD WIDTHS

STYLES 2390, 2410 & 2500: 63", 98" and 126" (160 cm, 248.9 cm, and 320 cm)  
STYLE 2360: 63" and 98" (160.0 cm and 248.9 cm)

### STANDARD ROLL LENGTH

30 Linear Yards (27.4 m)









## PERFORMANCE+ STYLE 2500+/2410+/2390+

### AVERAGE OPENNESS 1% (2500+), 3% (2410+), 5% (2390+)

SheerWeave Performance+ takes the performance of traditional SheerWeave Styles 2500, 2410 and 2390 fabrics “plus” the highly reflective properties of metallization and combines them to achieve the ultimate in sun control protection. By applying a thin metallized coating to the outward side of Performance+ fabrics, dark colors can achieve significant solar heat reduction comparable to what only light colors can achieve in other fabrics. The Performance+ metallized surface also improves glare reduction and outward visibility in light colors.

### FIRE CLASSIFICATION

California U.S. Title 19 (small scale), NFPA 701 TM#1 (small scale), NFPA 101 (Class A Rating), BS 5867 Part 2 Type B Performance, NFPA 701 TM#2 (large scale), CAN/ULC-S 109-03 (large and small scale), CAN/CGSB2-4.162-M80, M1 (NF-P-92 503), B2 (DIN 4102-1) IBC Section 803.1.1 (Class A Rating)

### BACTERIA AND FUNGAL RESISTANCE

ASTM E 2180, ASTM G21, AATCC30 Part 3, ASTM D 3273, GREENGUARD Mold and Bacteria Standard ASTM 6329; includes Microban antimicrobial additives

### ENVIRONMENTAL CERTIFICATION

Certified to GREENGUARD and GREENGUARD Gold standards for low chemical emissions into indoor air during product usage

### LEAD FREE

RoHS/Directive 2002/95/EC, US Consumer Product Safety Commission Section 101, ANSI/WCMA A 100.1-2007 for lead content and REACH (EC 1907/2006) compliant

### ACOUSTICAL PERFORMANCE & VALUE

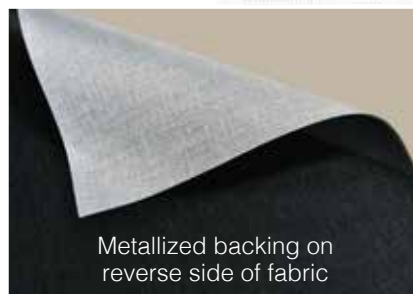
NRC (Noise Reduction Coefficient) and SAA (Sound Absorption Average) tested in accordance with ASTM C423-09a.  
STYLE 2500: NRC .50 / SAA .49

### STANDARD WIDTHS

63" and 96" (160.0 cm and 243.8 cm)

### STANDARD ROLL LENGTH

30 Linear Yards (27.4 m)



Metallized backing on  
reverse side of fabric







## STYLE 2701/2703/2705/2710

**AVERAGE OPENNESS 1% (2701), 3% (2703), 5% (2705), 10% (2710)**

Styles 2701, 2703, 2705 and 2710 are vinyl-coated fiberglass yarns woven into a traditional twill pattern for a two-sided fabric that provides the heat reduction benefit of light colors and the outward views and glare reduction of dark colors. Style 2701/2703/2705/2710 can also be used in exterior shading systems.

### FIRE CLASSIFICATION

California U.S. Title 19 (small scale), NFPA 701 TM#1 (small scale), NFPA 101 (Class A Rating), BS 5867 Part 2 Type B Performance, NFPA 701 TM#2 (large scale), CAN/ULC-S 109-03 (large and small scale), CAN/CGSB2-4.162-M80 and IBC Section 803.1.1 (Class A Rating)

### BACTERIA AND FUNGAL RESISTANCE

ASTM E 2180, ASTM G21, AATCC30 Part 3, ASTM D 3273, GREENGUARD Mold and Bacteria Standard ASTM 6329; includes Microban antimicrobial additives

### ENVIRONMENTAL CERTIFICATION

Certified to GREENGUARD and GREENGUARD Gold standards for low chemical emissions into indoor air during product usage

### LEAD FREE

RoHS/Directive 2002/95/EC, US Consumer Product Safety Commission Section 101, ANSI/WCMA A 100.1-2007 for lead content and REACH (EC 1907/2006) compliant

### STANDARD WIDTHS

STYLES 2701, 2703 & 2705: 63", 98" and 126" (160 cm, 248.9 cm, and 320 cm)  
STYLE 2710: 63" and 98" (160 cm and 248.9 cm)

### STANDARD ROLL LENGTH

30 Linear Yards (27.4 m)



Two-sided twill fabric



P28 Oyster / Charcoal

P92 Oyster / Chestnut

P91 Oyster / Pewter

P14 Oyster / Pearl Gray\*

P13 Oyster / Beige

P12 Oyster

\*P14 currently available in Styles 2701, 2703 and 2705









## STYLE 3000

### AVERAGE OPENNESS 14%

Combining vinyl-coated fiberglass and polyester yarns, Style 3000 is woven into a unique rib weave for a distinct look and color palette. The 14% openness of Style 3000 lets in more natural light while providing excellent outward visibility. Style 3000 can also be used in exterior shading systems.

### FIRE CLASSIFICATION

NFPA 701 TM#1 (small scale), NFPA 101 (Class A Rating), NFPA 701 TM#2 (large scale) and IBC Section 803.1.1 (Class A Rating)

### BACTERIA AND FUNGAL RESISTANCE

ASTM E 2180, ASTM G21, AATCC30 Part 3, ASTM D 3273, GREENGUARD Mold and Bacteria Standard ASTM 6329; includes Microban antimicrobial additives

### ENVIRONMENTAL CERTIFICATION

Certified to GREENGUARD and GREENGUARD Gold standards for low chemical emissions into indoor air during product usage

### LEAD FREE

RoHS/Directive 2002/95/EC, US Consumer Product Safety Commission Section 101, ANSI/WCMA A 100.1-2007 for lead content and REACH (EC 1907/2006) compliant

### STANDARD WIDTHS

72" and 96" (182.9 cm and 243.8 cm)

### STANDARD ROLL LENGTH

30 Linear Yards (27.4 m)











## STYLE 4400/4000/4100 WITH DOW ECOLIBRIUM™

**AVERAGE OPENNESS 3% (4400), 5% (4000), 10% (4100)**

As the only sun control fabrics on the market to use DOW's unique ECOLIBRIUM bio-based plasticizer, Styles 4400, 4000 and 4100 combine the durability of vinyl-coated polyester with the latest in green PVC technology. ECOLIBRIUM is a renewable alternative to traditional plasticizers that lowers greenhouse gas emissions as much as 40% vs existing PVC compounds. Style 4400/4000/4100 with DOW ECOLIBRIUM is phthalate-free, lead-free and RoHS compliant. These fabrics maintain all of the established benefits of traditional vinyl such as durability, cleanability and fabric longevity. Style 4400/4000/4100 can also be used in exterior shading systems.

### FIRE CLASSIFICATION

California U.S. Title 19 (small scale), NFPA 701 TM#1 (small scale), NFPA 101 (Class A Rating), BS 5867 Part 2 Type B Performance, NFPA 701 TM#2 (large scale), CAN/ULC-S 109-03 (large and small scale), CAN/CGSB2-4.162-M80 and IBC Section 803.1.1 (Class A Rating)

### BACTERIA AND FUNGAL RESISTANCE

ASTM E 2180, ASTM G21, AATCC30 Part 3, ASTM D 3273, GREENGUARD Mold and Bacteria Standard ASTM 6329; includes Microban antimicrobial additives

### ENVIRONMENTAL CERTIFICATION

Certified to GREENGUARD and GREENGUARD Gold standards for low chemical emissions into indoor air during product usage

### LEAD FREE

RoHS/Directive 2002/95/EC, US Consumer Product Safety Commission Section 101 and ANSI/WCMA A 100.1-2007 for lead content

### STANDARD WIDTHS

STYLES 4000 & 4400: 63", 84", 98" and 126" (160 cm, 213.4 cm, 248.9 cm and 320 cm)  
STYLE 4100: 63", 84" and 98" (160 cm, 213.4 cm and 248.9 cm)

### STANDARD ROLL LENGTH

30 Linear Yards (27.4 m)









## STYLE 4600/4500

### AVERAGE OPENNESS 3% (4600), 5% (4500)

Using advances in polyester yarn development, Styles 4600 and 4500 are thinner, lighter-weight, vinyl-coated polyester fabrics offered in 10 decorator colors. Woven in a 2x2 basketweave, these fabrics are ideal for applications where a more opaque and non-directional fabric is needed. Style 4600/4500 can also be used in exterior shading systems.

### FIRE CLASSIFICATION

California U.S. Title 19 (small scale), NFPA 701 TM#1 (small scale), NFPA 101 (Class A Rating), BS 5867 Part 2 Type B Performance, NFPA 701 TM#2 (large scale), CAN/ULC-S 109-03 (large and small scale) and IBC Section 803.1.1 (Class A Rating)

### BACTERIA AND FUNGAL RESISTANCE

ASTM E 2180, ASTM G21, AATCC30 Part 3, ASTM D 3273, GREENGUARD Mold and Bacteria Standard ASTM 6329; includes Microban antimicrobial additives

### ENVIRONMENTAL CERTIFICATION

Certified to GREENGUARD and GREENGUARD Gold standards for low chemical emissions into indoor air during product usage

### LEAD FREE

RoHS/Directive 2002/95/EC, US Consumer Product Safety Commission Section 101, ANSI/WCMA A 100.1-2007 for lead content and REACH (EC 1907/2006) compliant

### STANDARD WIDTHS

63", 98" and 126" (160.0 cm, 248.9 cm and 320.04 cm)

### STANDARD ROLL LENGTH

30 Linear Yards (27.4 m)











## STYLE 4650/4550

### AVERAGE OPENNESS 3% (4650), 5% (4550)

Woven from thin and lightweight vinyl-coated polyester yarns into a unique twill weave, Styles 4650 and 4550 offer a distinct two-sided appearance that maximizes both outward visibility and solar heat reduction. Style 4650/4550 can also be used in exterior shading systems.

### FIRE CLASSIFICATION

California U.S. Title 19 (small scale), NFPA 701 TM#1 (small scale), NFPA 101 (Class A Rating), BS 5867 Part 2 Type B Performance, NFPA 701 TM#2 (large scale), CAN/ULC-S 109-03 (large and small scale) and IBC Section 803.1.1 (Class A Rating)

### BACTERIA AND FUNGAL RESISTANCE

ASTM E 2180, ASTM G21, AATCC30 Part 3, ASTM D 3273, GREENGUARD Mold and Bacteria Standard ASTM 6329; includes Microban antimicrobial additives

### ENVIRONMENTAL CERTIFICATION

Certified to GREENGUARD and GREENGUARD Gold standards for low chemical emissions into indoor air during product usage

### LEAD FREE

RoHS/Directive 2002/95/EC, US Consumer Product Safety Commission Section 101, ANSI/WCMA A 100.1-2007 for lead content and REACH (EC 1907/2006) compliant

### STANDARD WIDTHS

63" and 98" (160.0 cm and 248.9 cm)

### STANDARD ROLL LENGTH

30 Linear Yards (27.4 m)



Distinct two-sided appearance







## STYLE 4800

### AVERAGE OPENNESS 1%

Designed with privacy in mind, Style 4800 is woven in a dense plain weave to limit directional visibility while allowing natural light to enter the room. Woven from vinyl-coated polyester yarns, Style 4800 is durable, easy to maintain and high performing with a robust construction that makes it ideal for heavy traffic areas and public spaces. Style 4800 can also be used in exterior shading systems.

### FIRE CLASSIFICATION

California U.S. Title 19 (small scale), NFPA 701 TM#1 (small scale), NFPA 101 (Class A Rating), BS 5867 Part 2 Type B Performance, NFPA 701 TM#2 (large scale), CAN/ULC-S 109-03 (large and small scale), CAN/CGSB2-4.162-M80 and IBC Section 803.1.1 (Class A Rating)

### BACTERIA AND FUNGAL RESISTANCE

ASTM E 2180, ASTM G21, AATCC30 Part 3, ASTM D 3273, GREENGUARD Mold and Bacteria Standard ASTM 6329; includes Microban antimicrobial additives

### ENVIRONMENTAL CERTIFICATION

Certified to GREENGUARD and GREENGUARD Gold standards for low chemical emissions into indoor air during product usage

### LEAD FREE

RoHS/Directive 2002/95/EC, US Consumer Product Safety Commission Section 101, ANSI/WCMA A 100.1-2007 for lead content and REACH (EC 1907/2006) compliant

### STANDARD WIDTHS

63", 98" and 126" (160.0 cm, 248.9 cm and 320 cm)

### STANDARD ROLL LENGTH

30 Linear Yards (27.4 m)









## STYLE 4901/4903

**AVERAGE OPENNESS 1% (4901), 3% (4903)**

Form follows function in this unique combination of color and weave. Using thin and light weight vinyl-coated polyester yarns, Styles 4901 and 4903 are as versatile as they are beautiful. Styles 4901 and 4903 can also be used in exterior shading systems.

### FIRE CLASSIFICATION

California U.S. Title 19 (small scale), NFPA 701 TM#1 (small scale), NFPA 101 (Class A Rating), BS 5867 Part 2 Type B Performance, NFPA 701 TM#2 (large scale), CAN/ULC-S 109-03 (large and small scale), CAN/CGSB2-4.162-M80 and IBC Section 803.1.1 (Class A Rating)

### BACTERIA AND FUNGAL RESISTANCE

ASTM E 2180, ASTM G21, AATCC30 Part 3, ASTM D 3273, GREENGUARD Mold and Bacteria Standard ASTM 6329; includes Microban antimicrobial additives

### ENVIRONMENTAL CERTIFICATION

Certified to GREENGUARD and GREENGUARD Gold standards for low chemical emissions into indoor air during product usage

### LEAD FREE

RoHS/Directive 2002/95/EC, US Consumer Product Safety Commission Section 101, ANSI/WCMA A 100.1-2007 for lead content and REACH (EC 1907/2006) compliant

### ACOUSTICAL PERFORMANCE & VALUE

NRC (Noise Reduction Coefficient) and SAA (Sound Absorption Average) tested in accordance with ASTM C423-09a.  
STYLE 4901: NRC .60 / SAA .59

### STANDARD WIDTHS

63" and 98" (160.0 cm and 248.9 cm)

### STANDARD ROLL LENGTH

30 Linear Yards (27.4 m)











## STYLE 5000

### AVERAGE OPENNESS RANGE 1% - 10%

SheerWeave Style 5000 features fabrics that combine textured yarns with traditional patterns. With a color palette of hushed naturals and rich earth tones, this collection offers a range of classic options designed to suit any style of decor or personal preference. Style 5000 can also be used in exterior roller shades.

### FIRE CLASSIFICATION

See swatch card or website ([www.phifer.com/suncontrol/interior](http://www.phifer.com/suncontrol/interior)) for individual pattern results

### BACTERIA AND FUNGAL RESISTANCE

ASTM E 2180 and ASTM G21; includes Microban antimicrobial additives

### ENVIRONMENTAL CERTIFICATION

Certified to GREENGUARD and GREENGUARD Gold standards for low chemical emissions into indoor air during product usage

### LEAD FREE

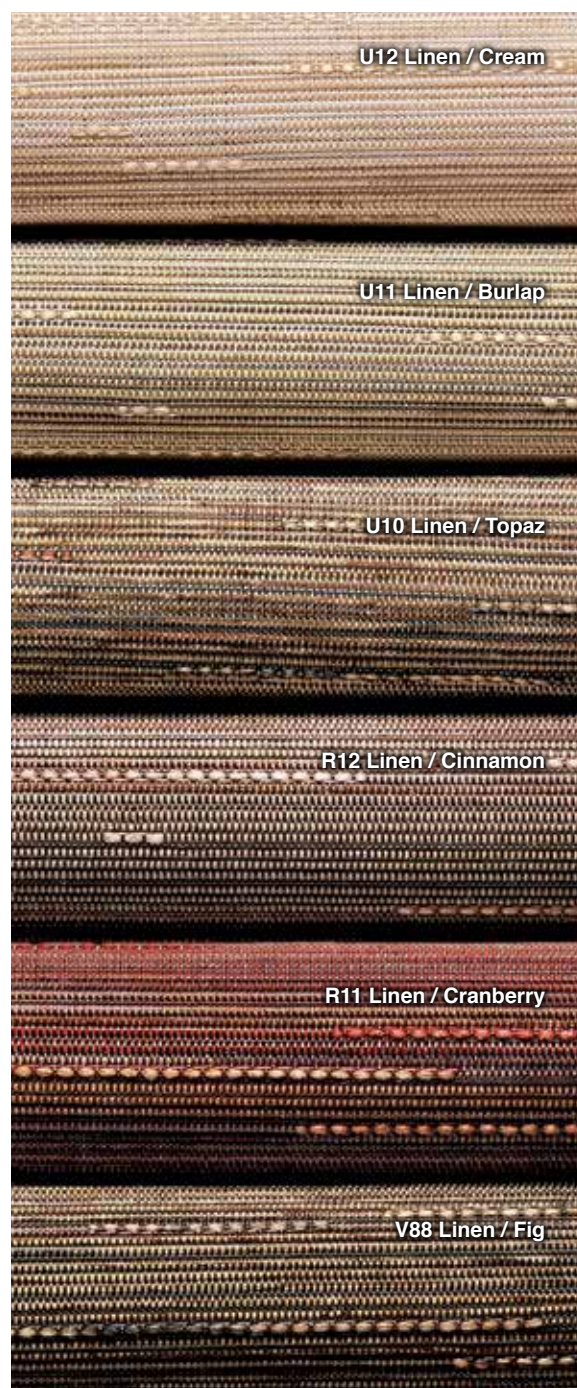
RoHS/Directive 2002/95/EC, US Consumer Product Safety Commission Section 101, ANSI/WCMA A 100.1-2007 for lead content and REACH (EC 1907/2006) compliant

### STANDARD WIDTHS

74" and 98" (187.96 cm and 248.9 cm)

### STANDARD ROLL LENGTH

30 Linear Yards (27.4 m)











STYLE 5000 CONTINUED









## STYLE 7000 BLACKOUT FABRIC

### AVERAGE OPENNESS 0%

Style 7000 is uniquely designed to provide total light blockage when complete room darkening is needed. With a broad range of decorator colors, the look and feel of rich cloth and a PVC-free composition, Style 7000 will enhance the beauty and function of both commercial and residential spaces. All Style 7000 colors have an off-white backing.

### FIRE CLASSIFICATION

California U.S. Title 19 (small scale), NFPA 701 TM#1 (small scale), BS 5867 Part 2 Type B Performance, CAN/ULC-S 109-03 (large and small scale), CAN/CGSB2-4.162-M80 and IBC Section 803.1.1 (Class A Rating)

### BACTERIA AND FUNGAL RESISTANCE

ASTM G21-96 and AATCC 174-1998 Part II and III

### ENVIRONMENTAL CERTIFICATION

Certified to GREENGUARD and GREENGUARD Gold standards for low chemical emissions into indoor air during product usage

### LEAD FREE

RoHS/Directive 2002/95/EC, US Consumer Product Safety Commission Section 101 and ANSI/WCMA A 100.1-2007 for lead content

### STANDARD WIDTHS

94" and 118" (238.8 cm and 299.7 cm)

### STANDARD ROLL LENGTH

30 Linear Yards (27.4 m)









## STYLE 7100 BLACKOUT FABRIC

### AVERAGE OPENNESS 0%

Style 7100 is a durable laminated blackout fabric that combines the woven texture of our Style 2000 as the face fabric with a sturdy vinyl backing to achieve total light blockage. Style 7100 coordinates easily with other SheerWeave fabrics when multi-purpose shades are needed. All Style 7100 colors have a white backing.

### FIRE CLASSIFICATION

California U.S. Title 19 (small scale), NFPA 701 TM#1 (small scale), NFPA 101 (Class B Rating), BS 5867 Part 2 Type B Performance, NFPA 701 TM#2 (large scale) and IBC Section 803.1.1 (Class B Rating)

### BACTERIA AND FUNGAL RESISTANCE

ASTM E 2180, ASTM G21, AATCC30 Part 3, ASTM D 3273, GREENGUARD Mold and Bacteria Standard ASTM 6329; Style 2000 face includes Microban antimicrobial additives.

### ENVIRONMENTAL CERTIFICATION

Certified to GREENGUARD and GREENGUARD Gold standards for low chemical emissions into indoor air during product usage

### LEAD FREE

RoHS/Directive 2002/95/EC, US Consumer Product Safety Commission Section 101, ANSI/WCMA A 100.1-2007 for lead content and REACH (EC 1907/2006) compliant

### STANDARD WIDTHS

63" and 96" (160.0 cm and 243.8 cm)

### STANDARD ROLL LENGTH

30 Linear Yards (27.4 m)









## STYLE 7400/7450

### 7400 - BLACKOUT FABRIC

### 7450 - LIGHT-FILTERING FABRIC

A picture of refined elegance, Style 7400 layers a subtle textured pattern over a soft, luxurious backing for total light blockage. Offering the face fabric of Style 7400, Style 7450 filters natural light while illuminating interior spaces. These fabrics are suitable for roller shades, Roman shades and panel track systems.

#### **FIRE CLASSIFICATION**

STYLE 7400: California U.S. Title 19 (small scale) and NFPA 701 TM#1 (small scale)  
STYLE 7450: California Technical Bulletin 117E

#### **BACTERIA AND FUNGAL RESISTANCE**

ASTM G21-96 and AATCC 174-1998 Part II and III

#### **ENVIRONMENTAL CERTIFICATION**

Certified to GREENGUARD and GREENGUARD Gold standards for low chemical emissions into indoor air during product usage

#### **LEAD FREE**

RoHS/Directive 2002/95/EC  
ANSI/WCMA A 100.1-2007 for lead content  
US Consumer Product Safety Commission Section 101

#### **STANDARD WIDTHS**

STYLES 7400 & 7450: 118" (299.7 cm)

#### **STANDARD ROLL LENGTH**

30 Linear Yards (27.4 m)









## STYLE 7500 BLACKOUT FABRIC

### AVERAGE OPENNESS 0%

This attractive blackout fabric maintains high quality at an economical price. Style 7500 is presented in a classic range of neutral colors with a unique PVC-free composition. Ideal for commercial and residential applications, SheerWeave Style 7500 is an excellent option when total light blockage is needed. All 7500 colors have an off-white backing.

### FIRE CLASSIFICATION

California U.S. Title 19 (small scale), NFPA 101 (Class A Rating), NFPA 701 TM#1 (small scale), BS 5867 Part 2 Type B Performance, CAN/ULC-S 109-03 (large and small scale) and IBC Section 803.1.1 (Class A Rating)

### BACTERIA AND FUNGAL RESISTANCE

ASTM E 2180 and ASTM G21

### ENVIRONMENTAL CERTIFICATION

Certified to GREENGUARD and GREENGUARD Gold standards for low chemical emissions into indoor air during product usage

### LEAD FREE

RoHS/Directive 2002/95/EC, US Consumer Product Safety Commission Section 101 and ANSI/WCMA A 100.1-2007 for lead content

### STANDARD WIDTHS

78", 98" and 118" (198.1 cm, 248.9 cm and 299.7 cm)

### STANDARD ROLL LENGTH

30 Linear Yards (27.4 m)



R99 Midnight x2 and S97 Orient x2 feature the same color front and back









STYLE 7600/7650  
7600 - BLACKOUT FABRIC  
7650 - LIGHT-FILTERING FABRIC

With a classic linen pattern face and soft PVC-free backing, Style 7600 combines total light blockage with timeless design. As a light-filtering option, Style 7650 uses the same linen pattern as Style 7600 while allowing filtered natural light to permeate your interior space. These fabrics are suitable for roller shades, Roman shades and panel track systems.

**FIRE CLASSIFICATION**

STYLE 7600: California U.S. Title 19 (small scale) and NFPA 701 TM#1 (small scale)  
STYLE 7650: California Technical Bulletin 117E

**BACTERIA AND FUNGAL RESISTANCE**

ASTM G21-96 and AATCC 174-1998 Part II and III

**ENVIRONMENTAL CERTIFICATION**

Certified to GREENGUARD and GREENGUARD Gold standards for low chemical emissions into indoor air during product usage

**LEAD FREE**

RoHS/Directive 2002/95/EC  
ANSI/WCMA A 100.1-2007 for lead content  
US Consumer Product Safety Commission Section 101

**STANDARD WIDTHS**

STYLES 7600 & 7650: 118" (300 cm)

**STANDARD ROLL LENGTH**

30 Linear Yards (27.4 m)









## STYLE 8000 PVC-FREE FABRIC

### AVERAGE OPENNESS 3%

Cradle to Cradle Certified Bronze and constructed from 100% polyester yarn, Style 8000 is strong, light weight and 100% recyclable. The unique 2x2 basketweave provides excellent fabric stability and enhances outward views.

### FIRE CLASSIFICATION

California U.S. Title 19 (small scale), NFPA 701 TM#1 (small scale), NFPA 101 (Class A Rating), BS 5867 Part 2 Type B Performance, NFPA 701 TM#2 (large scale), CAN/ULC-S 109-03 (large and small scale), CAN/CGSB2-4.162-M80, B1 (DIN 4102-1), and IBC Section 803.1.1 (Class A Rating)

### BACTERIA AND FUNGAL RESISTANCE

ASTM E 2180 and ASTM G21

### ENVIRONMENTAL CERTIFICATION

Cradle to Cradle™ Certified Bronze, GREENGUARD and GREENGUARD Gold standards for low chemical emissions into indoor air during product usage

### LEAD FREE

RoHS/Directive 2002/95/EC, US Consumer Product Safety Commission Section 101, ANSI/WCMA A 100.1-2007 for lead content and REACH (EC 1907/2006) compliant

### STANDARD WIDTHS

118" (299.7 cm)

### STANDARD ROLL LENGTH

30 Linear Yards (27.4 m)









## FABRIC FEATURES

### DOW ECOLIBRIUM™

DOW ECOLIBRIUM Bio-Based Plasticizers offer a renewable alternative to traditional petroleum-based plasticizers for a more sustainable option. This unique green technology is exclusive to Phifer for the window treatment industry and can only be found in SheerWeave Style 4400/4000/4100 fabrics.

ECOLIBRIUM benefits include:

- Lowers greenhouse gas emissions as much as 40% vs. existing PVC compounds
- 98% of the plasticizer is derived from non-fossil fuel based feedstock
- Lower carbon footprint
- Phthalate-free
- RoHS compliant
- LEED credits for rapidly renewable content may be available
- Ability for compound to be recycled in a standard vinyl stream
- USDA certified bio-based product

SheerWeave fabrics manufactured with DOW ECOLIBRIUM maintain all of the established benefits of traditional vinyl such as durability, cleanability and fabric longevity.



### GREENGUARD

GREENGUARD Certification ensures products have met some of the world's most rigorous and comprehensive standards for low emissions of volatile organic compounds (VOCs) into indoor air. Phifer was the first manufacturer in the window treatment industry to achieve GREENGUARD certification for interior shading fabrics. Certification is completely voluntary and ensures that the highest industry standards are being applied to maintain indoor air quality for the health and safety of building occupants.



### MICROBAN®

Phifer SheerWeave fabrics are the only shade fabrics in the world to include Microban protection. Microban antimicrobial protection works continuously to inhibit the growth of bacteria, mold and mildew that can cause stains, odors and product deterioration.



- Microban antimicrobial protection is infused into Phifer SheerWeave sun control fabrics for lasting protection that won't wash off or wear away for the lifetime of the shade.
- SheerWeave fabrics infused with Microban antimicrobial technology are ideal for any commercial or residential environment where microbes are a concern, including healthcare, hospitality, home, office, schools and institutions.
- Most SheerWeave fabrics include Microban® antimicrobial product protection. Microban is the leading technology in antibacterial/antifungal protection.

### UV PROTECTION

Most SheerWeave fabrics have received the Seal of Approval by the Melanoma International Foundation (MIF) for effectiveness in preventing sun damage to the skin or eyes.



### CRADLE TO CRADLE

The Cradle to Cradle Products Innovation Institute is a non-profit organization that administers the Cradle to Cradle Certified product standard. This third party program guides designers and manufacturers through a continual improvement process that looks at a product through five quality categories – material health, material reutilization, renewable energy and carbon management, water stewardship and social fairness. The Cradle to Cradle mark provides consumers, regulators, employees and industry peers with a clear, visible and tangible validation of a manufacturer's ongoing commitment to sustainability and their communities.





anton  
Ballet

EXIT





## FABRIC FEATURES

### ENERGY SAVINGS

Solar heat gain can account for up to 50% of a building's energy costs according to the U.S. Department of Energy. By reflecting solar energy, Phifer's broad range of SheerWeave fabrics reduce solar heat gain, lower energy costs and improve comfort. Phifer shade fabrics allow for the use of natural day lighting to reduce the need for artificial lighting and provide additional energy savings.



### LEAD FREE

Phifer's entire line of SheerWeave fabrics is lead free, meeting and far exceeding several window covering industry testing standards for hazardous materials. SheerWeave interior sun control products comply with RoHS/Directive 2002/95/EC, the US Consumer Product Safety Commission Section 101 and ANSI/WCMA A100.1-2007 for lead content. According to the Environmental Protection Agency, certain levels of exposure to lead, which can be found in everything from painted toys and furniture to soil around a home, can result in a variety of health effects. Even low levels of exposure can be harmful to children. The lead-free stamp marks another confirmation of Phifer's commitment to remain environmentally responsible.



### PVC-FREE/RECYCLABLE

When a more environmentally-sensitive and sustainable fabric option is preferred, Phifer offers several PVC-free fabrics in multiple openness factors and blackout collections. SheerWeave Infinity<sub>2</sub> is manufactured from 100% post-industrial waste and is 100% recyclable. Phifer maintains an active reclamation program for Infinity<sub>2</sub>.



### ACOUSTICAL (NOISE REDUCTION)

Driven by LEED environmental objectives, the trend of commercial design is to use more glass with exposed floors and ceilings. With these hard surfaces comes an acoustical challenge that architects and designers must address. Acoustical performance values are expressed by the NRC (Noise Reduction Coefficient) or the SAA (Sound Absorption Average). We have tested a broad range of SheerWeave fabrics for both values based on a free hanging vertical panel to best emulate a roller shade. BASIC 3%, Style 2500, Performance+ Style 2500+ and Style 4901 have overall NRC values of .50-.60 with even more impressive values within frequency ranges of human speech.



BASIC 3%	NRC .60 / SAA .60
Style 2500	NRC .55 / SAA .54
Performance+ Style 2500+	NRC .50 / SAA .49
Style 4901	NRC .60 / SAA .59

### PRINTABLE *(as shown at left)*

Printing unique colors, patterns, logos and graphics on SheerWeave opens a whole new opportunity for product applications. SheerWeave fabrics are ideal for digital and screen printing methods. Your local printer can recommend the best print options based on their capabilities.



### TRACKLESS TECHNOLOGY®

All SheerWeave fiberglass yarn fabrics now feature Phifer's unique TrackLess Technology. This breakthrough technology minimizes the fiberglass yarn's inherent qualities to track when being rolled up in a shade. With TrackLess Technology, these same fabrics will track less, roll up straighter and reduce shade fabrication time.









## FABRIC FEATURES

### **DURABILITY/CLEANABILITY**

Functional and durable, SheerWeave interior sun control fabrics offer light management while withstanding spills, splatters and the hustle and bustle of high traffic areas. These fabrics are easy to maintain – see below for product-specific cleaning instructions.

Styles 1000, 2000/2100, 2500/2410/2390/2360, 2701/2703/2705/2710, 3000, 4400/4000/4100, 4600/4500, 4650/4550, 4800, 4901/4903, 5000, 7100, Infinity<sub>2</sub> and BASIC:

Note: The following cleaning practices will not affect the products' ability to resist the growth of microorganisms.

- Clean with mild soap and water.
- If cleaners other than mild soap and water are desired, test in an inconspicuous area prior to use.
- Rinse thoroughly after cleaning.

***Paint solvents will damage the vinyl surface of SheerWeave products and should not be used.***

Styles 7000, 7400/7450, 7500, 7600/7650 and 8000:

Fabric should be regularly dusted/vacuumed as appropriate. If commercial spot cleaners are used, they must first be tested and allowed to dry on an inconspicuous area to ensure compatibility.

Performance+ Style 2500+/2410+/2390+:

The metallized coating is fragile and must be handled with the utmost care to avoid damage. Attention must be given during all phases of fabrication and installation to protect the metallized coating. Do not scrub. Do not use tape, solvents or abrasive cleaners which could damage the fabric coating. Clean with a soft, damp cloth.

If you need further assistance, please call 1-800-221-5497.





## FEATURES CHART

SHEERWEAVE STYLE	NUMBER OF COLORS	AVERAGE OPENNESS	DOW ECOLIBRIUM	CRADLE TO CRADLE	GREENGUARD	MICROBAN	MIF APPROVED	TRACKLESS TECHNOLOGY	PRINTABLE	NOISE REDUCTION	RECYCLABLE	PVC FREE	LEAD FREE	PHTHALATE FREE	FLAME RETARDANT	HALOGEN FREE - FR	ENERGY SAVINGS	INTERIOR USE	EXTERIOR USE	BLACKOUT	WIDE WIDTHS	MADE IN USA
Infinity <sub>2</sub> 1%	9	1%			✓		✓		✓		✓	✓	✓	✓	✓		✓	✓				✓
Infinity <sub>2</sub> 3%	9	3%			✓		✓		✓		✓	✓	✓	✓	✓		✓	✓				✓
Infinity <sub>2</sub> 5%	9	5%			✓		✓		✓		✓	✓	✓	✓	✓		✓	✓				✓
BASIC 3%	6	3%			✓	✓	✓	✓	✓	✓			✓		✓	✓	✓	✓	✓			✓
BASIC 5%	6	5%			✓	✓	✓	✓	✓				✓		✓	✓	✓	✓	✓			✓
1000	2	25%			✓	✓		✓	✓				✓		✓	✓	✓	✓	✓			✓
2000	10	5%			✓	✓	✓	✓	✓				✓		✓	✓	✓	✓	✓		✓	✓
2100	10	10%			✓	✓	✓	✓	✓				✓		✓	✓	✓	✓	✓			✓
2390	10	5%			✓	✓	✓	✓	✓				✓		✓	✓	✓	✓	✓		✓	✓
2360	10	10%			✓	✓	✓	✓	✓				✓		✓	✓	✓	✓	✓			✓
2410	10	3%			✓	✓	✓	✓	✓				✓		✓	✓	✓	✓	✓		✓	✓
2500	10	1%			✓	✓	✓	✓	✓	✓			✓		✓	✓	✓	✓	✓		✓	✓
PERF+ 2390	10	5%			✓	✓	✓	✓					✓		✓	✓	✓	✓				✓
PERF+ 2410	10	3%			✓	✓	✓	✓					✓		✓	✓	✓	✓				✓
PERF+ 2500	10	1%			✓	✓	✓	✓		✓			✓		✓	✓	✓	✓				✓
2701	6	1%			✓	✓	✓	✓	✓				✓		✓	✓	✓	✓	✓		✓	✓
2703	6	3%			✓	✓	✓	✓	✓				✓		✓	✓	✓	✓	✓		✓	✓
2705	6	5%			✓	✓	✓	✓	✓				✓		✓	✓	✓	✓	✓		✓	✓
2710	5	10%			✓	✓	✓	✓	✓				✓		✓	✓	✓	✓	✓			✓
3000	9	14%			✓	✓		✓	✓				✓		✓	✓	✓	✓	✓			✓
4000	9	5%	✓		✓	✓	✓		✓				✓	✓	✓	✓	✓	✓	✓		✓	✓
4100	9	10%	✓		✓	✓	✓		✓				✓	✓	✓	✓	✓	✓	✓			✓
4400	9	3%	✓		✓	✓	✓		✓				✓	✓	✓	✓	✓	✓	✓		✓	✓
4500	10	5%			✓	✓	✓		✓				✓		✓	✓	✓	✓	✓		✓	✓
4600	10	3%			✓	✓	✓		✓				✓		✓	✓	✓	✓	✓		✓	✓
4550	4	5%			✓	✓	✓		✓				✓		✓	✓	✓	✓	✓			✓
4650	4	3%			✓	✓	✓		✓				✓		✓	✓	✓	✓	✓			✓
4800	12	1%			✓	✓	✓		✓				✓		✓	✓	✓	✓	✓		✓	✓
4901	13	1%			✓	✓	✓		✓	✓			✓		✓	✓	✓	✓	✓			✓
4903	13	3%			✓	✓	✓		✓				✓		✓	✓	✓	✓	✓			✓
5000	37	1-10%			✓	✓	✓						✓		✓	✓	✓	✓	✓			✓
7000	10	0%			✓		✓		✓			✓	✓	✓	✓		✓	✓		✓	✓	
7100	6	0%			✓	✓	✓	✓	✓				✓		✓	✓	✓	✓		✓		✓
7400	8	0%			✓		✓		✓			✓	✓	✓	✓		✓	✓		✓	✓	
7450	8	LF			✓				✓			✓	✓	✓	✓	✓	✓	✓			✓	
7500	9	0%			✓		✓		✓			✓	✓	✓	✓		✓	✓		✓	✓	
7600	9	0%			✓					✓		✓	✓	✓	✓	✓	✓	✓		✓	✓	
7650	9	LF			✓					✓		✓	✓	✓	✓	✓	✓	✓			✓	
8000	7	3%		✓	✓		✓				✓	✓	✓	✓	✓	✓	✓	✓			✓	







## PHOTO CREDITS

<b>PAGE 2</b>	Photo courtesy of HUNTER DOUGLAS, South America.
<b>PAGE 4</b>	Photo courtesy of HUNTER DOUGLAS, South America.
<b>PAGE 6</b>	Photo courtesy of RIELAMERICANO, Buenos Aires, Argentina.
<b>PAGE 8</b>	Photo courtesy of DRAPER INC., Spiceland, Indiana, USA.
<b>PAGE 10</b>	Photo courtesy of UNIFLEX WINDOW FASHIONS, Sao Paulo, Brazil.
<b>PAGE 12</b>	Photo courtesy of DRAPER INC., Spiceland, Indiana, USA.
<b>PAGE 14</b>	Photo courtesy of GRUPO AMERICAN CLASSIC, Monterrey, México.
<b>PAGE 16</b>	Photo courtesy of DRAPER INC., Spiceland, Indiana, USA.
<b>PAGE 18</b>	Photo courtesy of DRAPER INC., Spiceland, Indiana, USA.
<b>PAGE 20</b>	Photo courtesy of HUNTER DOUGLAS, USA.
<b>PAGE 24</b>	Photo courtesy of RIELAMERICANO, Buenos Aires, Argentina.
<b>PAGE 26</b>	Photo courtesy of HUNTER DOUGLAS, South America.
<b>PAGE 28</b>	Photo courtesy of DRAPER INC., Spiceland, Indiana, USA.
<b>PAGE 30</b>	Photo courtesy of HUNTER DOUGLAS, South America.
<b>PAGE 32</b>	Photo courtesy of WINDOW INTERIORS, Altamonte Springs, Florida, USA.
<b>PAGE 36</b>	Photo courtesy of LAFAYETTE VENETIAN BLIND, West Lafayette, Indiana, USA.
<b>PAGE 38</b>	Photo courtesy of RIELAMERICANO, Buenos Aires, Argentina.
<b>PAGE 40</b>	Photo courtesy of HUNTER DOUGLAS, South America.
<b>PAGE 42</b>	Photo courtesy of HUNTER DOUGLAS, South America.
<b>PAGE 44</b>	Photo courtesy of HUNTER DOUGLAS, South America.
<b>PAGE 46</b>	Photo courtesy of M+N TEXTILES, The Netherlands.
<b>PAGE 48</b>	Photo courtesy of HUNTER DOUGLAS, USA.
<b>PAGE 50</b>	Photo courtesy of DRAPER INC., Spiceland, Indiana, USA.
<b>PAGE 52</b>	Photo courtesy of DRAPER INC., Spiceland, Indiana, USA.
<b>PAGE 54</b>	Photo courtesy of HUNTER DOUGLAS, South America.
<b>PAGE 56</b>	Photo courtesy of HUNTER DOUGLAS, South America.

# **PHIFER**

INCORPORATED

P. O. Box 1700 • Tuscaloosa, Alabama 35403-1700 USA  
Phone: 205.345.2120 • FAX: 205.391.0799  
Toll Free USA/Canada: 1.800.221.5497  
phifer.com • ISO Registered



® SheerWeave, SheerWeave Infinity and TrackLess Technology are registered trademarks of PHIFER INCORPORATED.  
® ™ ECOLIBRIUM and the DOW Diamond are trademarks of The Dow Chemical Company ("Dow") or an affiliated company of Dow.  
™ UL, the UL logos and the UL mark are trademarks of UL LLC.  
® MICROBAN is a registered trademark of Microban Products Company.  
™ Cradle to Cradle Certified is a mark licensed by the Cradle to Cradle Products Innovation Institute

© PHIFER INCORPORATED, 2017  
Tuscaloosa, Alabama USA  
V17 3009666 (brochure) or  
3032784 (brochure with 3 holes)