



Read Window Products, LLC.
5900 Weisbrook Lane
Knoxville, TN 37909
Phone: 865-288-6243
Fax: 865-675-5572

SUBMITTAL

PROJECT: TVA KYH Control Room Reno

ARCHITECT:

CONTRACTOR: Triangle

SPECIFICATION: 12 24 00 Window Treatments

PRODUCT: Manual Roller Shade

SUPPLIER: Read Window Products, LLC

Revision: 0

Date: 10/22/2025

Read Window Products LLC
David Storm
dstorm@readwindow.com

Clutch-Operated FlexShade®

Manual, clutch-operated window shade with smooth, quiet operation, and independent control

SUBMITTAL

TECHNICAL INFO

Please check all appropriate selections and attach room schedule with verified dimensions.

FLEXSHADE CLN

Fabric Series: _____

Color Name / Number: _____

Openness Factor: _____

Please see [Fabric Options](#) on the Draper® website for fabric colors and specifications.

Select Clutch Location

As seen from INSIDE the room facing the window. Also indicate on room schedule.

☐ Right (standard) ☐ Left (available) VIF

Select Clutch Color

☒ White (standard) ☐ Black (optional)

Optional Spring Assist

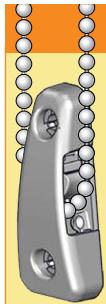
- ☐ Spring Assist per manufacturer's standards
(as required based on fabric weight)
- ☐ Spring Assist on all units (minimum shade width 48" [122cm])
- ☐ Spring Assist as indicated on room schedule

Select Bead Chain Type:

- ☒ Steel Chain
- ☒ Stainless Steel (standard)

Select Fabric Orientation:

- ☒ Regular Roll
(from BACK of roller - standard)
- ☐ Reverse Roll
(from FRONT of roller)



Child Safety Information

To comply with Child Safety Standard ANSI/WCMA A100.1-2022, this product ships with a tensioning device attached to the bead chain. Incorrect installation partially disables the product. When properly fastened to mounting surface, the pre-installed Tensioned Hold Down device for clutch-operated units prevents creation of a hazardous loop by maintaining tension on the bead chain.



Scan for more information, including short videos on correctly installing the tensioning device, or go to draperinc.com/windowshades/childsafety.

Select Hem Bar Style

- ☒ Closed Pocket - 1" (25mm) Elliptical Slat (standard)
- ☐ Open Pocket Elliptical Slat ☐ Large Flat Exposed Hem Bar
- ☐ Small Flat Exposed Hem Bar ☐ 1 3/8" (21mm) Tube
- ☐ Round Exposed Hem Bar ☐ Interior Cable Guide Hem Bar
- ☐ 5/8" (16mm) Tube ☐ None

Select Hardware

- ☐ Universal Brackets
- ☐ Endcaps Only: ☐ Standard ☐ Leveling Bracket
- ☒ Endcaps with Fascia: ☐ Standard ☐ Leveling Bracket

Select Hardware Finish (Does not apply to Type "D" Headbox)

- ☒ Clear Anodized (standard) ☐ Ivory ☐ Black
- ☐ Bronze ☐ White ☐ Custom (contact Draper)

Available Sizes:

WIDTH:	2'	3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'	14'
HEIGHT													
2'													
3'													
4'													
5'													
6'													
7'													
8'													
9'													
10'													
11'													
12'													
13'													
14'													

* Sizes requiring large endcaps/brackets will vary according to fabric.

- ☐ Small endcaps/brackets
- ☐ Large endcaps/brackets may be required.



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draperinc.com | 765.987.7999 | 800.238.7999
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PROJECT: _____

ARCHITECT: _____

CONTRACTOR: _____

SUPPLIER: _____

DATE: _____ REVISED: _____

Specifications

EQUIPMENT

BEAD CHAIN CLUTCH OPERATOR: DuPont™ Zytel® nylon resin (glass fiber reinforced), black or white. 20 lb (9.1kg) standard. 24 lb (10.9kg) as necessary. Bi-directional for mounting at either end of roller. Control loop, of any length, is a plastic or stainless steel bead chain (standard). Plastic chain in ivory, grey, or black. Never needs adjusting. Patent pending.

OPERATOR LOCATION: Right hand standard, left hand available.

OPTIONAL SPRING-ASSIST BEAD CHAIN CLUTCH: Adjustment-free system includes spring-assist components to reduce lifting forces required to raise the shade. Manufacturer shall provide estimated torque for shade unit. Spring-assist is recommended on estimated non-spring-assist torque above 6 lb-in; required on shades with an estimated torque higher than 15 lb-in.

COMPONENTS

ROLLERS: Sizes 1 1/2" (38mm) dia. with .065 wall, 2" (51mm) dia. with .080 wall, up to 3.12" (79.23mm) dia. with .095 wall, in steel or extruded aluminum. Roller assembly easily removable without removal of mounting hardware.

UNIVERSAL MOUNTING BRACKETS: 1018 plated steel stamping. Sizes 1 3/4" (41mm) and 2 1/4" (57mm). Mount to face, ceiling, or jamb. Brackets do not require additional adapters. Powder coated white or black to match selected clutch color.

ROLLER IDLER ASSEMBLY: Fiberglass reinforced polyester thermopolymer (PBT), with spring-loaded pin to interlock with mounting bracket.

FABRIC ATTACHMENT: Fabric connected to the roller tube with LSE (low surface energy) double sided adhesive specifically developed to attach coated textiles to metal.

HEM BAR: Closed Pocket Elliptical Slat: 1" (25mm) aluminum elliptical slat inside of a 1 3/8" (30mm) heat sealed pocket. Open Pocket Elliptical Slat: 1" (25mm) aluminum elliptical slat with plastic ends inside of a 1 3/8" (30mm) heat sealed pocket. Flat Exposed Hem Bar: Small: 5/8" x 3/8" (22x8mm) Large: 1 1/2" x 3/8" (38x8mm) aluminum rectangular with plastic end caps. Round Exposed Hem Bar: Small: 5/8" (16mm) Large: 1 3/8" (30mm) aluminum with plastic end caps. Exposed hem bars powder coated in black, bronze, ivory, white, or clear anodized.

ENDCAPS: 1018 steel stamping. 2 sizes: 3 3/4" x 3 3/4" (86x98mm) and 4 5/8" x 4 5/8" (117x117mm). Complete with adapter roller bracket. Installs to face, ceiling, or jamb. Accepts box covers and fabric guide.

ENDCAP COVERS: Plastic covers snap onto endcaps. Available in silver, ivory, bronze, black, or white to match fascia.

FASCIA: "L" cover of extruded aluminum, .060 (1.5mm) wall. Fascia snaps onto endcaps without exposed fasteners. Clear Anodized (standard), black, white, ivory, or bronze powder coat finish available. Custom powder coat colors available. Continuous fascia available with side-by-side units.

SURFACE HEADBOX: Consists of fascia, "L" shaped back/top cover of extruded aluminum. Endcaps slide into extrusion without exposed fasteners.

POCKET HEADBOX: For pocket installation, includes a "U" shaped extruded aluminum back/top/front cover with removable bottom closure panel.

SMALL HEADBOX SIZE: 3 7/16" x 3 15/16" (87x100mm).

LARGE HEADBOX SIZE: 4 15/16" x 4 15/16" (119x119mm). Some exposed fasteners required.

TYPE "D" POCKET: Type "D" Shade Pocket, extruded aluminum, for perimeter installation. Accepts FlexShades installed with ceiling brackets. Finished in white paint. 5" x 5 3/8" x .125" (127x136x3mm) with 7/8" (22mm) tile support lip & removable bottom closure.

LIGHT GAP REDUCTION HARDWARE: Extruded aluminum. Accepts edges of fabric, prevents light gaps. Interior of channel provides for use of flat head screws. Available with or without lining.

"L" ANGLE: 3/4" x 1" x 12'3" (1.9x2.5x373cm); 1" x 2 3/4" x 16' (2.5x7x488cm) or cut to length.

"U" CHANNEL: 1" x 2 1/2" x 16' (2.5x6.4x488cm) or cut to length.

"H" CHANNEL: 1" x 5" x 16' (2.5x12.7x488cm) or cut to length.

VINYL "L" ANGLE: 1 1/2" x 3/4" x 8' (3.81x1.9x243.84cm) stock length only. Installed using adhesive.

INTERIOR CABLE GUIDE KIT: Includes slat, slat weight, slat endcaps, and cable guide. Slat/hem bar is a 5/8" (16mm) round bar for use in a 1-5/8" (41mm) open-ended hem pocket.

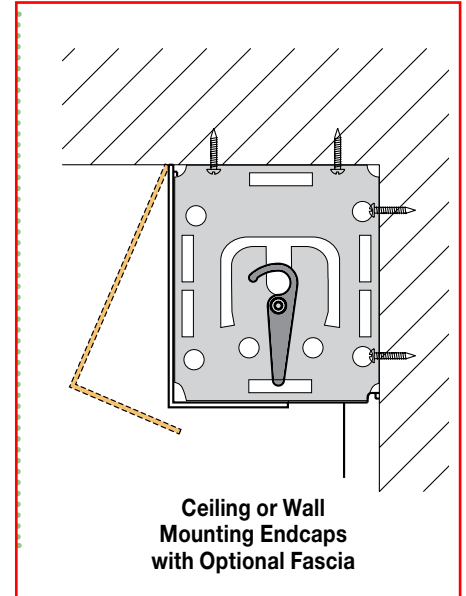
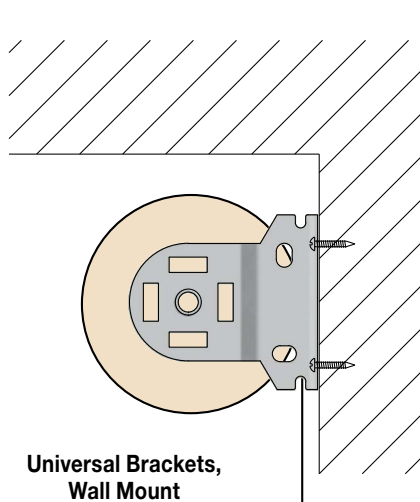
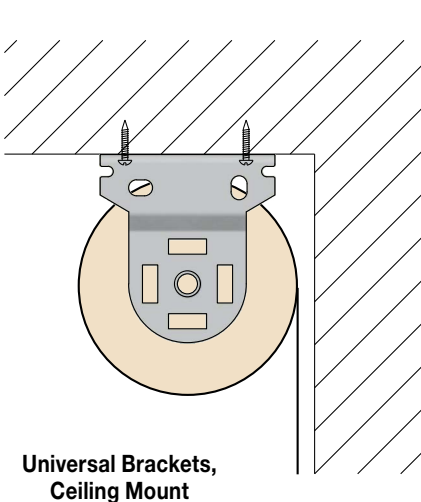
Zytel® is a registered trademark of E. I. du Pont de Nemours & Company. DuPont™ is a trademark of E. I. du Pont de Nemours & Company.

DOWNLOADABLE 3-PART SPECIFICATIONS: available at www.draperyinc.com.

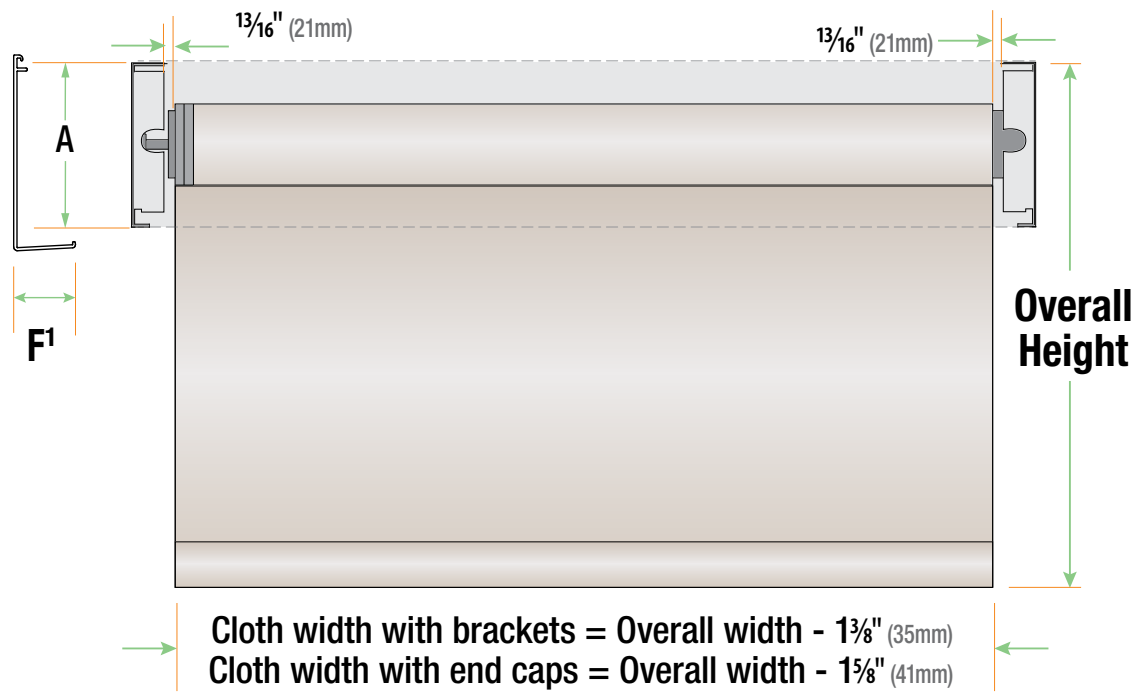
Please note: Dimensions of rollers, operators and hardware at manufacturer's discretion.

Mounting Hardware Selections

Please Note: Endcaps have the only attachment points for mounting a manual FlexShade. Optional fascia and headbox have a thickness of 1/8" (1.6mm).

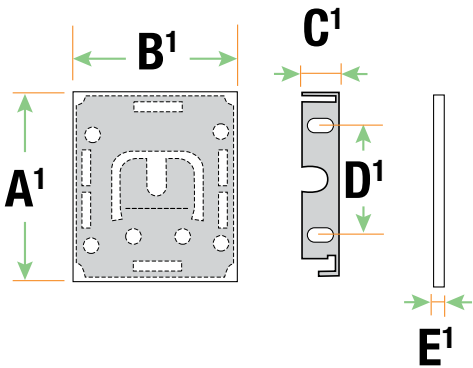


Dimensions



Please Note:

- Shade Overall Width includes plastic endcap covers.
- Pair of small endcap covers adds 1/8" (3.2mm) to Overall Width.
- Pair of large endcap covers adds 3/16" (4.8mm) to Overall Width.



HEADBOX WITH ENDCAPS				
	SMALL		LARGE	
A'	3 15/16"	100mm	4 11/16"	119mm
B'	3 7/16"	87mm	4 11/16"	119mm
C'	5/8"	16mm	5/8"	16mm
D'	2"	51mm	3 1/4"	83mm
E'	1/16"	1.6mm	3/32"	2.4mm
F'	1 3/16"	30mm	1 9/16"	40mm

ENDCAPS WITH FASCIA				
	SMALL		LARGE	
A'	3 7/8"	98mm	4 5/8"	117mm
B'	3 3/8"	86mm	4 5/8"	117mm
C'	5/8"	16mm	5/8"	16mm
D'	2"	51mm	3 1/4"	83mm
E'	1/16"	1.6mm	3/32"	2.4mm
F'	1 3/16"	30mm	1 9/16"	40mm

Shade Overall Width includes plastic endcap covers.
Pair of small endcap covers adds 1/8" (3.2mm) to Overall Width.
Pair of large endcap covers adds 3/16" (4.8mm) to Overall Width.

Above dimensions based upon 20 lb clutch and 1 1/2" (38mm) diameter roller.

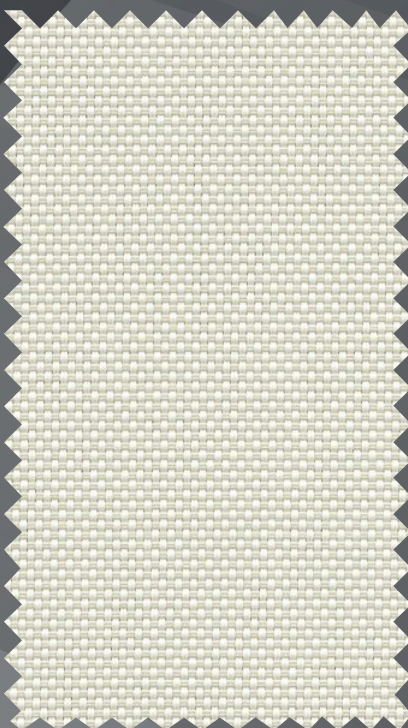
SheerWeave® Infinity® 2

1%, 3%, & 5%

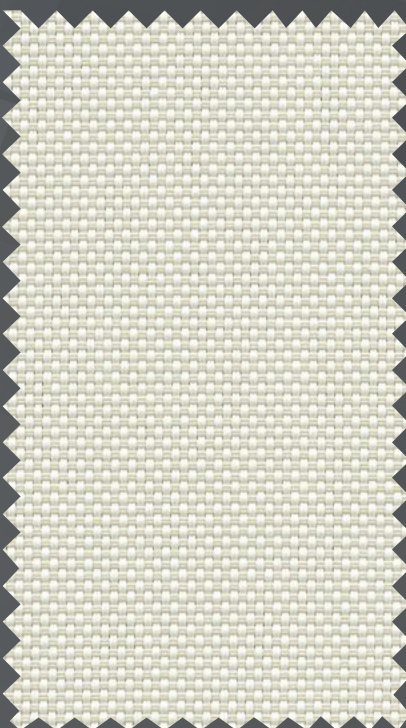
I N F I N I T Y 2

SHEERWEAVE®
BY PHIFER

PG2 Almond (1% open)



PG2 Almond (3% open)



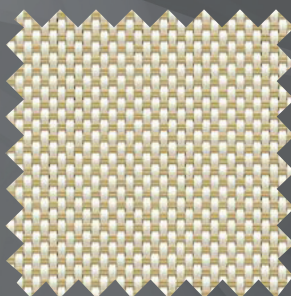
PG2 Almond (5% open)



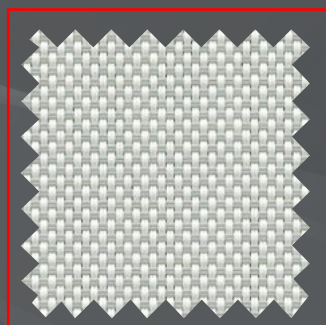
The above openness options are also available in the colors shown below.



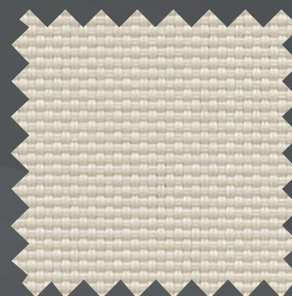
1% Open PG1 Cotton



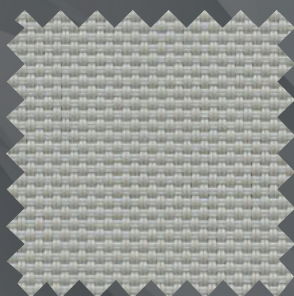
1% Open PG3 Wheat



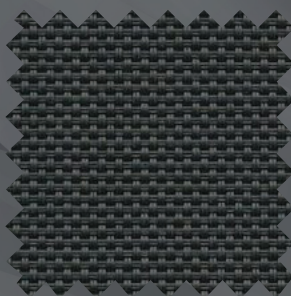
1% Open PG4 Stone



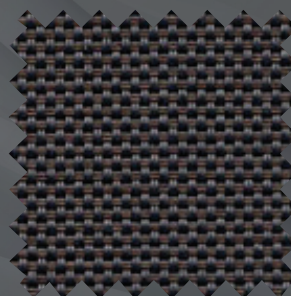
1% Open QG1 Barley



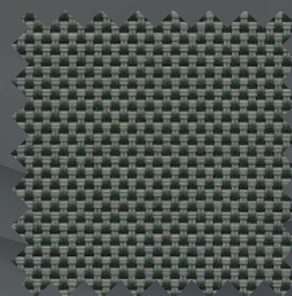
1% Open VG1 Nickel



1% Open VG2 Midnight



1% Open VG3 Bark



1% Open VG4 Slate

Digital sample of actual colors may vary slightly.

DRAPER®

SheerWeave® Infinity² 1%, 3%, & 5%

SheerWeave Infinity² 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, Infinity² 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.

SHEERWEAVE STYLE Infinity²

STANDARD WIDTH	63" and 98" (160 cm and 248.9 cm)	FABRIC THICKNESS	1%: 0.032 in (0.813 mm) 3%: 0.031 in (0.787 mm)	5%: 0.030 in (0.762 mm)
ROLL LENGTH	30 Linear Yards (27.4 lm)	OPENNESS FACTOR	1%: Approximately 1% 3%: Approximately 3%	5%: Approximately 5%
COMPOSITION	100% TPO (Thermoplastic Olefin), 20% TPO Fiber Yarn / 80% TPO Coating on TPO Yarn	UV BLOCKAGE	1%: Approximately 99% 3%: Approximately 97%	5%: Approximately 95%
MESH WEIGHT	1%: 13.9 oz/yd ² (471 g/m ²) 3%: 13.69 oz/yd ² (464.17 g/m ²) 5%: 12.82 oz/yd ² (434.67 g/m ²)	ACOUSTICAL VALUE	1%: NRC 0.20 / SAA 0.23 3%: NRC 0.20 / SAA 0.19	5%: NRC 0.10 / SAA 0.11
		ACOUSTICAL PERFORMANCE	NRC (Noise Reduction Coefficient) and SAA (Sound Absorption Average) tested in accordance with ASTM C423-09a.	

SPECIFICATIONS

FIRE CLASSIFICATION	1%: NFPA 701 TM#1 (small scale), NFPA 101 (Class A Rating), CAN/ULC-S 109 (large and small scale), IBC Section 803.1.1 (Class A Rating) 3%: NFPA 701 TM#1 (small scale), NFPA 101 (Class A Rating), CAN/ULC-S 109 (large scale), IBC Section 803.1.1 (Class A Rating), BS 5867 Part 2 Type B Performance. 5%: NFPA 701 TM#1 (small scale), NFPA 101 (Class A Rating), CAN/ULC-S 109 (large and small scale), IBC Section 803.1.1 (Class A Rating), BS 5867 Part 2 Type B Performance, CAN/CGSB 2-4.162-M80.
BACTERIA AND FUNGAL RESISTANCE	ASTM E 2180, ASTM G21.
ENVIRONMENTAL CERTIFICATION	Certified to GREENGUARD and GREENGUARD Gold standards for low chemical emissions into indoor air during product usage.
SAFE USE	RoHS Compliant, US Consumer Product Safety Commission Section 101, ANSI/WCMA A 100.1-2007 for lead content and REACH Compliant.
STANDARD USES	Roller shades and panel tracks.
UV PROTECTION	SheerWeave sun control fabrics are an effective way to reduce harmful UV rays. Phifer Incorporated is a proud member of the Skin Cancer Foundation's Corporate Council.
WARRANTY	5-year interior.

TECHNICAL DATA

		SOLAR OPTICAL PROPERTIES												SHGC/G VALUE g-tot (glass & blind)					
		TS%			RS%			AS%			TV%			Single 1/4 CL			Insulating 1HA		
	OPENNESS %	1%	3%	5%	1%	3%	5%	1%	3%	5%	1%	3%	5%	1%	3%	5%	1%	3%	5%
COLOR	NUMBER																		
Cotton	PG1	20	20	23	68	70	68	12	10	9	18	19	22	0.29	0.28	0.30	0.22	0.21	0.22
Almond	PG2	15	17	20	61	61	60	24	22	20	12	15	18	0.31	0.32	0.33	0.23	0.23	0.23
Wheat	PG3	12	12	14	54	52	51	34	36	35	10	9	12	0.35	0.37	0.37	0.25	0.25	0.26
Stone	PG4	13	12	15	55	52	52	32	36	33	11	11	14	0.35	0.37	0.37	0.24	0.25	0.25
Barley	QG1	18	16	19	52	53	51	30	31	30	15	14	17	0.37	0.37	0.38	0.26	0.25	0.26
Nickel	VG1	8	9	10	37	36	34	55	55	56	7	8	11	0.42	0.44	0.45	0.30	0.30	0.30
Midnight	VG2	1	3	5	6	6	6	93	91	89	2	5	8	0.59	0.59	0.60	0.36	0.37	0.37
Bark	VG3	3	3	4	7	7	7	90	90	89	5	4	6	0.58	0.58	0.59	0.37	0.37	0.37
Slate	VG4	2	3	5	9	10	9	89	87	86	4	5	7	0.57	0.57	0.58	0.36	0.36	0.36



PRODUCT CERTIFIED FOR
LOW CHEMICAL EMISSIONS
UL.COM/GG
UL 2818



*TS - Solar Transmittance, RS - Solar Reflectance, AS - Solar Absorptance, TV - Visual Transmittance *SHGC = Solar Heat Gain Coefficient *1/4 CL = 1/4" Clear Glass, 1 HA = 1" Heat Absorbing Glass *Fabrics Installed Internally, Zero-Degree Profile Angle *Solar Heat Gain Coefficient (SHGC) shown calculated according to Office of Building Technology, State and Community Programs, Energy Efficiency and Renewable Energy, U.S. Department of Energy's definition of SHGC. SHGC represents the percentage of solar heat gain that is transmitted to the interior through the glass and shading system. If you are using glass whose performance is listed in terms of SC, you may convert to SHGC by multiplying the SC by 0.87.



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draperinc.com

For additional information, questions, or to request fabric samples, please contact your Draper sales representative or scan to visit request.draperinc.com



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Confirm Fascia Finish
Clear Anodized was specified. Confirm Selection



FLEXSHADE® HARDWARE COLORS

STANDARD POWDER COAT COLORS, THERMALLY BONDED, SUPERIOR ADHESION

- These colors are standard for interior and exterior hardware and are applied to fascia, headboxes, and side and sill channels. Colors are lightly textured. Clear anodized and silver have a smooth finish. Custom colors are available on request.



