SECTION 13 31 00

FABRICS FOR FABRIC STRUCTURES

Display hidden notes to specifier. (Don't know how? [Click Here](https://www.arcat.com/sd/display_hidden_notes.shtml))

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\*\* NOTE TO SPECIFIER \*\* Shelter-Rite Architectural Fabrics ; architectural fabrics by Seaman Corporation.  
This section is based on the products of Shelter-Rite Architectural Fabrics , which is located at:1000 Venture BlvdWooster, OH 44691Toll Free Tel: 800-927-8578Tel: 330-262-1111Fax: 330-263-6950Email: [request info (fbradenburg@seamancorp.com)](https://arcat.com/rfi?action=email&company=Shelter-Rite%252BArchitectural%252BFabrics%252B&message=RE%253A%2520Spec%2520Question%2520(13310ssr)%253A%2520&coid=53237&spec=13310ssr&rep=&fax=330-263-6950)  
Web: <https://www.architecturalfabrics.com/>   
 [ [Click Here](https://arcat.com/company/shelter-rite-architectural-fabrics-53237) ] for additional information.  
Seaman Corporation, manufactures Shelter-Rite Architectural Fabrics. Made in the USA, Shelter-Rite® leads the industry in modern materials and methods, producing high performance architectural fabrics for over 70 years. A vertically integrated company, Seaman Corporation develops proprietary formulations, knits, weaves and coats fabric in our two manufacturing facilities located in Wooster, OH and Bristol, TN.  
Shelter-Rite Architectural Fabrics have been the material of choice of architects, designers and fabricators for commercial and military projects in the United States and throughout the world. Shelter-Rite is engineered with a proprietary coating formula for superior UV and mildew resistance, and unique weft inserted knit fabric that provides excellent tensile, tear and seam strength. This time-tested technology has resulted in architectural structures that withstand years of exposure to harsh environments.  
In addition to Shelter-Rite Architectural Fabrics, Seaman Corporation also produces high performance FiberTite® Roof Systems, XR® Geomembrane Liners and Industrial Fabrics for Shelter-Rite® Truck Tarps, Dock Seals; and military fabrics used for flexible fuel and water tanks and military tents.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Consult with the Structural Engineer of Record for the Project. Choosing the right architectural fabric for your application requires first choosing the structure type being designed and then knowing the tensile strength required to meet the design's performance criteria. Where more than one fabric is acceptable, available warranties may also be made part of the decision process. Warranty durations listed are maximum possible warranties. Warranties are fabric and color dependent. Delete building types and fabrics not required for the Project.

* + 1. Building Types and Fabric Options:
       1. Structure Type: Air supported.
          1. Fabric No. 8028. Strip Tensile: 515/515 lbs per inch (4500/4500 N per 50 mm).

Warranty: 20 years maximum.

* + - * 1. Fabric No. 9032. Strip Tensile: 650/650 lbs per inch (5700/5700 N per 50 mm).

Warranty: 20 years maximum.

* + - 1. Structure Type: Frame structures.
         1. Fabric No. 3820. Strip Tensile: 300/275 lbs per inch (2630/2410 N per 50 mm).

Warranty: 10 years maximum.

* + - * 1. Fabric No. 8324. Strip Tensile: 300/240 lbs per inch (2630/2100 N per 50 mm).

Warranty: 10 years maximum.

* + - * 1. Fabric No. 8424. Strip Tensile: 300/275 lbs per inch (2630/2400 N per 50 mm).

Warranty: 10 years maximum.

* + - * 1. Fabric No. 8520. Strip Tensile: 325/325 lbs per inch (2850/2850 N per 50 mm).

Warranty: 10 years maximum.

* + - * 1. Fabric No. 8028. Strip Tensile: 515/515 lbs per inch (4500/4500 N per 50 mm).

Warranty: 20 years maximum.

* + - 1. Structure Type: Tensile.
         1. Fabric No. 3820. Strip Tensile: 300/275 lbs per inch (2630/2410 N per 50 mm).

Warranty: 10 years maximum.

* + - * 1. Fabric No. 8324. Strip Tensile: 300/240 lbs per inch (2630/2100 N per 50 mm).

Warranty: 10 years maximum.

* + - * 1. Fabric No. 8424. Strip Tensile: 300/275 lbs per inch (2630/2400 N per 50 mm).

Warranty: 10 years maximum.

* + - * 1. Fabric No. 8028. Strip Tensile: 515/515 lbs per inch (4500/4500 N per 50 mm).

Warranty: 20 years maximum.

* + - * 1. Fabric No. 9032. Strip Tensile: 650/650 lbs per inch (5700/5700 N per 50 mm).

Warranty: 20 years maximum.

* + - 1. Structure Type: Tent.
         1. Fabric No. 3820. Strip Tensile: 300/275 lbs per inch (2630/2410 N per 50 mm).

Warranty: 10 years maximum.

* 1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 13 30 00 - Fabricated Engineered Structures.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. ASTM International (ASTM):
       1. ASTM D751 - Standard Test Methods for Coated Fabrics.
       2. ASTM D2136 - Standard Test Method for Coated Fabrics-Low-Temperature Bend Test.
       3. ASTM D4533 - Standard Test Method for Trapezoid Tearing Strength of Geotextiles.
       4. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
       5. ASTM D6413 - Standard Test Method for Flame Resistance of Textiles (Vertical Test).
    2. California Fire Marshal Registration.
    3. European Standards Organization (EN):
       1. EN-13501 - Fire classification of construction products and building elements. Classification using data from reaction to fire tests.
    4. Federal Standard (FED-STD):
       1. FED-STD-191 - Textile Test Methods.
    5. Chinese Standards (GB):
       1. GB 8624 - Fire Test to Building Material and Products.
    6. National Fire Protection Association (NFPA):
       1. NFPA 701 - Standard Methods of Fire Tests for Flame Propagation of Textiles and Films.
    7. Underwriters Laboratories (UL):
       1. ULC S109 - Standard Method for Flame Tests of Flame Resistant Fabrics and Films.
       2. ULC-S102 - Standard Method of Test for Surface Burning Characteristics of building Materials and Assemblies.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data:
        1. Manufacturer's data sheets on each product to be used.
        2. Preparation instructions and recommendations.
        3. Storage and handling requirements and recommendations.
        4. Typical installation methods.

\*\* NOTE TO SPECIFIER \*\* Delete if not applicable to product type.

* + 1. Verification Samples: Two representative units of each type, size, pattern and color.
    2. Shop Drawings: Include details of materials, construction and finish. Include relationship with adjacent construction.
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum five years documented experience.
     2. Installer Qualifications: Company specializing in performing Work of this section with minimum two years documented experience with projects of similar scope and complexity.
     3. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.
  2. PRE-INSTALLATION CONFERENCE
     1. Convene a conference approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Contractor and trades involved. Agenda shall include schedule, responsibilities, critical path items and approvals.
  3. DELIVERY, STORAGE, AND HANDLING
     1. Store and handle in strict compliance with manufacturer's written instructions and recommendations.
     2. Protect from damage due to weather, excessive temperature, and construction operations.
  4. PROJECT CONDITIONS
     1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
  5. WARRANTY
     1. Manufacturer's standard limited warranty unless indicated otherwise.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Shelter-Rite Architectural Fabrics , which is located at:1000 Venture BlvdWooster, OH 44691Toll Free Tel: 800-927-8578Tel: 330-262-1111Fax: 330-263-6950Email: [request info (fbradenburg@seamancorp.com)](https://arcat.com/rfi?action=email&company=Shelter-Rite%252BArchitectural%252BFabrics%252B&message=RE%253A%2520Spec%2520Question%2520(13310ssr)%253A%2520&coid=53237&spec=13310ssr&rep=&fax=330-263-6950);Web: <https://www.architecturalfabrics.com/>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
  1. ARCHITECTURAL FABRICS

\*\* NOTE TO SPECIFIER \*\* First Step: The fabric product chosen is based on building type and tensile strength required. Choices are listed in the "Section Includes" article in PART 1 and need to be approved by the Engineer of Record for the building.  
Second Step: Determine color, translucency, and exterior top finish. The only color option for translucent fabric is white. The exterior finish choice determines how well the fabric ages but may also limit color options. Top finishes are listed below from shortest to longest useful lifespans.  
Third Step: Choose the remaining product options.  
Note it is possible to have more than one fabric/color on a building, which would allow various patterned effects. Contact the manufacturer for more information.  
Delete Product paragraphs not required.

* + 1. Product: Architectural Fabric No. 3820 as manufactured by Shelter-Rite.

\*\* NOTE TO SPECIFIER \*\* Delete top finish, color, and backside color options not required.

* + - 1. Translucent Acrylic Top Finish:
         1. Color: DC-615 Translucent White. 10 percent translucent; 10 year warranty.
         2. Color: DC-6 White. 4 percent translucent; 10 year warranty.
         3. Backside Color: Same as exterior color.
         4. Backside Top Finish: Acrylic.
      2. Translucent PVDF Top Finish:
         1. Color: DC-615 Translucent White. 10 percent translucent; 10 year warranty.
         2. Color: DC-6 White. 4 percent translucent; 10 year warranty.
         3. Backside Color: Same as exterior color.
         4. Backside Top Finish: Acrylic.
      3. Translucent Brite-White Tedlar PVF Top Coating:
         1. Color: DC-184 Translucent White; 10 percent translucent; 15 year warranty.
         2. Color: DC-615 Translucent White. 6 percent translucent; 15 year warranty.
         3. Color: DC-6 White. 3 percent translucent; 15 year warranty.
         4. Backside Color: Same as exterior color.
         5. Backside Top Finish: Acrylic.
      4. Opaque Acrylic Top Finish:
         1. Color: DC-688 White Opaque: 10 year warranty.
         2. Color: DC-24 Green. 10 year warranty.
         3. Color: DC-46 Royal Blue. 10 year warranty.
         4. Color: DC-42 Yellow. 10 year warranty.
         5. Color: DC-174 Vermillion Red. 10 year warranty.
         6. Color: DC-260 Forrest Green. 10 year warranty.
         7. Color: DC-4 Gray 10 year warranty.
         8. Color: DC-113 Beige. 10 year warranty.
         9. Color: DC-128 Sandstone 10 year warranty.
         10. Color: DC-146 Eggshell. 10 year warranty.
         11. Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         12. Backside Color: White.
         13. Backside Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         14. Backside Top Finish: Acrylic.
      5. Opaque PVDF Top Finish:
         1. Color: DC-688 White Opaque. 10 year warranty.
         2. Color: DC-24 Green. 10 year warranty.
         3. Color: DC-46 Royal Blue. 10 year warranty.
         4. Color: DC-42 Yellow. 10 year warranty.
         5. Color: DC-174 Vermillion Red. 10 year warranty.
         6. Color: DC-260 Forrest Green. 10 year warranty.
         7. Color: DC-4 Gray. 10 year warranty.
         8. Color: DC-113 Beige. 10 year warranty.
         9. Color: DC-128 Sandstone. 10 year warranty.
         10. Color: DC-146 Eggshell. 10 year warranty.
         11. Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         12. Backside Color: White.
         13. Backside Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         14. Backside Top Finish: Acrylic.

\*\* NOTE TO SPECIFIER \*\* Kynar top coating system is a fluoropolymer finish with great dirt resistance and colorfastness. The unique property with Kynar top coating system is that it can be made in any standard or custom color.

* + - 1. Opaque Kynar Top Coating.
         1. Color: DC-24 Green. 10 year warranty.
         2. Color: DC-46 Royal Blue. 10 year warranty.
         3. Color: DC-42 Yellow. 10 year warranty.
         4. Color: DC-174 Vermillion Red. 10 year warranty.
         5. Color: DC-260 Forrest Green. 10 year warranty.
         6. Color: DC-4 Gray. 10 year warranty.
         7. Color: DC-113 Beige. 10 year warranty.
         8. Color: DC-128 Sandstone. 10 year warranty.
         9. Color: DC-146 Eggshell. 10 year warranty.
         10. Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         11. Backside Color: White.
         12. Backside Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         13. Backside Top Finish: Acrylic.

\*\* NOTE TO SPECIFIER \*\* Brite-White or colored Tedlar films provide the greatest resistance to dirt pick-up and are basically self-cleaning. The Shelter-Rite Tedlar products are extremely colorfast and are the only product backed by a 20 year warranty that covers dirt resistance and colorfastness. Tedlar colors are limited to what is listed below.

* + - 1. Opaque Tedlar PVF Top Coating.
         1. Color: Brite-White. 15 year warranty.
         2. Color: Granite Gray. 15 year warranty.
         3. Color: Sand Stone. 15 year warranty.
         4. Color: Spruce Green. 15 year warranty.
         5. Color: Misty Gray. 15 year warranty.
         6. Color: Dawn Gray. 15 year warranty.
         7. Color: Salem Blue. 15 year warranty.
         8. Color: High Sky. 15 year warranty.
         9. Color: Highway Green. 15 year warranty.
         10. Color: Bayberry. 15 year warranty.
         11. Color: Desert Sand. 15 year warranty.
         12. Backside Color: White.
         13. Backside Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         14. Backside Top Finish: Acrylic.
      2. Physical Properties and Characteristics:
         1. Fabric Layer: Plain woven polyester design.
         2. Base Fabric Weight: 5.0 oz per sq yd (170 g per sq m).
         3. Finished Coated Weight per ASTM D751: 20.0 oz per sq yd, plus 2 to minus 1 oz pe sq yd (678 g per sq m, plus 70 to minus 35 g per sq m).
         4. Grab Tensile per ASTM D751: 375/325 lbs (1669/1446 N).
         5. Strip Tensile per ASTM D751 Procedure B: 300/275 lbs per inch (263/241 daN per 50 mm).
         6. Adhesion per ASTM D751 Dielectric Weld: 10 lbs per in (9 daN per 50 mm).
         7. Hydrostatic Resistance per ASTM D751 Procedure A: 500 psi (3.45 MPa).
         8. Low Temperature - LTC per ASTM D2136; 1/8 inch (3 mm) mandrel, 4 hour: Pass at minus 40 degrees F (minus 40 degrees C).
         9. Flame resistance:

Meets NFPA 701; FED-STD-191 Method 5903: 2 second flameout.

ASTM D6413-13: 2 second flameout.

Registered by California Fire Marshal; No. F-10302; ASTM E84 and ULC-S102:

Flame Spread Index: Less than or equal to 25.

Smoke Development Rating: Less than or equal to 450.

* + - * 1. Biaxial Stretch Test: Time Duration: 2 hours.

Warp and Fill Direction, Loaded at 1:1 Ratio.

Fill Load: 75 lbs per inch (13.13 kN per m). 7.28 percent.

Warp Load: 75 lbs per inch (13.13 kN per m). 2.60 percent.

Warp and Fill Direction, Loaded at 1:2 Ratio.

Fill Load: 60 lbs per inch (10.50 kN per m). 6.24 percent.

Warp Load: 30 lbs per inch (5.25 kN per m). 0.52 percent.

Warp and Fill Direction, Loaded at 2:1 Ratio.

Fill Load: 30 lbs per inch (5.25 kN per m). 2.08 percent.

Warp Load: 60 lbs per inch (10.50 kN per m). 2.86 percent.

* + 1. Product: Architectural Fabric No. 8028 as manufactured by Shelter-Rite.

\*\* NOTE TO SPECIFIER \*\* Delete top finish, color, and backside color options not required.

* + - 1. Translucent Acrylic Top Finish:
         1. Color: DC-615 Translucent White. 10 percent translucent; 15 year warranty.
         2. Color: DC-6 White. 4 percent translucent; 20 year warranty.
         3. Backside Color: Same as exterior color.
         4. Backside Top Finish: Acrylic.
      2. Translucent PVDF Top Finish:
         1. Color: DC-615 Translucent White. 10 percent translucent; 15 year warranty.
         2. Color: DC-6 White. 4 percent translucent; 20 year warranty.
         3. Backside Color: Same as exterior color.
         4. Backside Top Finish: Acrylic.
      3. Translucent Brite-White Tedlar Top Finish:
         1. Color: DC-184 Translucent White; 10 percent translucent; 20 year warranty.
         2. Color: DC-615 Translucent White. 6 percent translucent; 20 year warranty.
         3. Color: DC-6 White. 3 percent translucent; 20 year warranty.
         4. Backside Color: Same as exterior color.
         5. Backside Top Finish: Acrylic.
      4. Opaque Acrylic Top Finish:
         1. Color: DC- 6 White Opaque: 20 year warranty.
         2. Color: DC-24 Green. 15 year warranty.
         3. Color: DC-46 Royal Blue. 15 year warranty.
         4. Color: DC-42 Yellow. 15 year warranty.
         5. Color: DC-174 Vermillion Red. 15 year warranty.
         6. Color: DC-260 Forrest Green. 15 year warranty.
         7. Color: DC-4 Gray 20 year warranty.
         8. Color: DC-113 Beige. 20 year warranty.
         9. Color: DC-128 Sandstone 20 year warranty.
         10. Color: DC-146 Eggshell. 20 year warranty.
         11. Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         12. Backside Color: White.
         13. Backside Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         14. Backside Top Finish: Acrylic.
      5. Opaque PVDF Top Finish:
         1. Color: DC-6 White Opaque: 20 year warranty.
         2. Color: DC-24 Green. 15 year warranty.
         3. Color: DC-46 Royal Blue. 15 year warranty.
         4. Color: DC-42 Yellow. 15 year warranty.
         5. Color: DC-174 Vermillion Red. 15 year warranty.
         6. Color: DC-260 Forrest Green. 15 year warranty.
         7. Color: DC-4 Gray. 20 year warranty.
         8. Color: DC-113 Beige. 20 year warranty.
         9. Color: DC-128 Sandstone. 20 year warranty.
         10. Color: DC-146 Eggshell. 20 year warranty.
         11. Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         12. Backside Color: White.
         13. Backside Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         14. Backside Top Finish: Acrylic.

\*\* NOTE TO SPECIFIER \*\* Kynar top coating system is a fluoropolymer finish with great dirt resistance and colorfastness. The unique property with Kynar top coating system is that it can be made in any standard or custom color.

* + - 1. Opaque Kynar Top Coating.
         1. Color: DC-24 Green. 10 year warranty.
         2. Color: DC-46 Royal Blue. 10 year warranty.
         3. Color: DC-42 Yellow. 10 year warranty.
         4. Color: DC-174 Vermillion Red. 10 year warranty.
         5. Color: DC-260 Forrest Green. 10 year warranty.
         6. Color: DC-4 Gray. 10 year warranty.
         7. Color: DC-113 Beige. 10 year warranty.
         8. Color: DC-128 Sandstone. 10 year warranty.
         9. Color: DC-146 Eggshell. 10 year warranty.
         10. Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         11. Backside Color: White.
         12. Backside Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         13. Backside Top Finish: Acrylic.

\*\* NOTE TO SPECIFIER \*\* Brite-White or colored Tedlar films provide the greatest resistance to dirt pick-up and are basically self-cleaning. The Shelter-Rite Tedlar products are extremely colorfast and are the only product backed by a 20 year warranty that covers dirt resistance and colorfastness. Terdlar colors are limited to what is listed below.

* + - 1. Opaque Tedlar PVF Top Coating.
         1. Color: Brite-White. 20 year warranty.
         2. Color: Granite Gray. 20 year warranty.
         3. Color: Sand Stone. 20 year warranty.
         4. Color: Spruce Green. 20 year warranty.
         5. Color: Misty Gray. 20 year warranty.
         6. Color: Dawn Gray. 20 year warranty.
         7. Color: Salem Blue. 20 year warranty.
         8. Color: High Sky. 20 year warranty.
         9. Color: Highway Green. 20 year warranty.
         10. Color: Bayberry 20 year warranty.
         11. Color: Desert Sand. 20 year warranty.
         12. Backside Color: White.
         13. Backside Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         14. Backside Top Finish: Acrylic.
      2. Physical Properties and Characteristics:
         1. Fabric Layer: Weft-inserted knit polyester design.
         2. Base Fabric Weight: 7.5 oz per sq yd (250 g per sq m).
         3. Finished Coated Weight per ASTM D751: 28.0 oz per sq yd, plus 2 to minus 1 oz pe sq yd (950 g per sq m, plus 70 to minus 35 g per sq m).
         4. Trapezoid Tear per ASTM D4533: 85/85 lbs (380/380 N).
         5. Grab Tensile per ASTM D751: 700/700 lb. (3115/3115 N).
         6. Strip Tensile per ASTM D751 Procedure B: 515/515 lbs per inch (4500/4500 N per 50 mm).
         7. Adhesion per ASTM D751 Dielectric Weld: 10 lbs per inch (90 N per 50 mm).
         8. Hydrostatic Resistance per ASTM D751 Procedure A: 500 psi (3.45 MPa).
         9. Dead Load Seam Strength per ASTM D751 2 inch (50 mm) seam, 4 hr, 1 inch (25 mm) strip:

266 lbs at 70 degrees F (1180 N at 21 degrees C).

133 lbs at 160 degrees F (590 N at 71 degrees C).

* + - * 1. Low Temperature - LTC per ASTM D2136 1/8 inch (3 mm) mandrel, 4 hour:

LTC: Pass at minus 40 degrees F (minus 40 degrees C).

LTA: Pass at minus 67 degrees F (minus 55 degrees C).

* + - * 1. Flame resistance:

Meets NFPA 701; ULC S109: 2 second flameout.

ASTM D6413-13: 2 second flameout.

Registered by California Fire Marshal; No. F-10301; GB8624-2006; ASTM E84 and ULC-S102:

Flame Spread Index: Less than or equal to 25.

Smoke Development Rating: Less than or equal to 450.

EN-13501-1: B-s2, d0.

* + - * 1. Biaxial Stretch Test: Time Duration: 2 hours.

Warp and Fill Direction, Loaded at 1:1 Ratio.

Fill Load: 90 lbs per inch (15.76 kN per m). Stretch: 6.22 percent.

Warp Load: 90 lbs per inch (15.76 kN per m). Stretch: 4.23 percent.

Warp and Fill Direction, Loaded at 1:2 Ratio.

Fill Load: 90 lbs per inch (15.76 kN per m). Stretch: 6.94 percent.

Warp Load: 45 lbs per inch (7.88 kN per m). Stretch: 1.04 percent.

Warp and Fill Direction, Loaded at 2:1 Ratio.

Fill Load: 45 lbs per inch (7.88 kN per m). Stretch: 2.43 percent.

Warp Load: 90 lbs per inch (15.76 kN per m). Stretch: 5.56 percent.

* + 1. Product: Architectural Fabric No. 8324 as manufactured by Shelter-Rite.

\*\* NOTE TO SPECIFIER \*\* Delete top finish, color, and backside color options not required.

* + - 1. Translucent Acrylic Top Finish:
         1. Color: DC-615 Translucent White. 10 percent translucent; 10 year warranty.
         2. Color: DC-6 White. 4 percent translucent; 10 year warranty.
         3. Backside Color: Same as exterior color.
         4. Backside Top Finish: Acrylic.
      2. Translucent PVDF Top Finish:
         1. Color: DC-615 Translucent White. 10 percent translucent; 10 year warranty.
         2. Color: DC-6 White. 4 percent translucent; 10 year warranty.
         3. Backside Color: Same as exterior color.
         4. Backside Top Finish: Acrylic.
      3. Translucent Brite-White Tedlar Top Finish:
         1. Color: DC-184 Translucent White; 10 percent translucent; 15 year warranty.
         2. Color: DC-615 Translucent White. 6 percent translucent; 15 year warranty.
         3. Color: DC-6 White. 3 percent translucent; 15 year warranty.
         4. Backside Color: Same as exterior color.
         5. Backside Top Finish: Acrylic.
      4. Opaque Acrylic Top Finish:
         1. Color: DC- 6 White Opaque: 10 year warranty.
         2. Color: DC-24 Green. 10 year warranty.
         3. Color: DC-46 Royal Blue. 10 year warranty.
         4. Color: DC-42 Yellow. 10 year warranty.
         5. Color: DC-174 Vermillion Red. 10 year warranty.
         6. Color: DC-260 Forrest Green. 10 year warranty.
         7. Color: DC-4 Gray 10 year warranty.
         8. Color: DC-113 Beige. 10 year warranty.
         9. Color: DC-128 Sandstone 10 year warranty.
         10. Color: DC-146 Eggshell. 10 year warranty.
         11. Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         12. Backside Color: White.
         13. Backside Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         14. Backside Top Finish: Acrylic.
      5. Opaque PVDF Top Finish:
         1. Color: DC-6 White Opaque: 0 percent. 10 year warranty.
         2. Color: DC-24 Green. 10 year warranty.
         3. Color: DC-46 Royal Blue. 10 year warranty.
         4. Color: DC-42 Yellow. 10 year warranty.
         5. Color: DC-174 Vermillion Red. 10 year warranty.
         6. Color: DC-260 Forrest Green. 10 year warranty.
         7. Color: DC-4 Gray. 10 year warranty.
         8. Color: DC-113 Beige. 10 year warranty.
         9. Color: DC-128 Sandstone. 10 year warranty.
         10. Color: DC-146 Eggshell. 10 year warranty.
         11. Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         12. Backside Color: White.
         13. Backside Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         14. Backside Top Finish: Acrylic.

\*\* NOTE TO SPECIFIER \*\* Kynar top coating system is a fluoropolymer finish with great dirt resistance and colorfastness. The unique property with Kynar top coating system is that it can be made in any standard or custom color.

* + - 1. Opaque Kynar Top Coating.
         1. Color: DC-24 Green. 10 year warranty.
         2. Color: DC-46 Royal Blue. 10 year warranty.
         3. Color: DC-42 Yellow. 10 year warranty.
         4. Color: DC-174 Vermillion Red. 10 year warranty.
         5. Color: DC-260 Forrest Green. 10 year warranty.
         6. Color: DC-4 Gray. 10 year warranty.
         7. Color: DC-113 Beige. 10 year warranty.
         8. Color: DC-128 Sandstone. 10 year warranty.
         9. Color: DC-146 Eggshell. 10 year warranty.
         10. Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         11. Backside Color: White.
         12. Backside Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         13. Backside Top Finish: Acrylic.

\*\* NOTE TO SPECIFIER \*\* Brite-White or colored Tedlar films provide the greatest resistance to dirt pick-up and are basically self-cleaning. The Shelter-Rite Tedlar products are extremely colorfast and are the only product backed by a 20 year warranty that covers dirt resistance and colorfastness. Terdlar colors are limited to what is listed below.

* + - 1. Opaque Tedlar PVF Top Coating.
         1. Color: Brite-White. 15 year warranty.
         2. Color: Granite Gray. 15 year warranty.
         3. Color: Sand Stone. 15 year warranty.
         4. Color: Spruce Green. 15 year warranty.
         5. Color: Misty Gray. 15 year warranty.
         6. Color: Dawn Gray. 15 year warranty.
         7. Color: Salem Blue. 15 year warranty.
         8. Color: High Sky. 15 year warranty.
         9. Color: Highway Green. 15 year warranty.
         10. Color: Bayberry 15 year warranty.
         11. Color: Desert Sand. 15 year warranty.
         12. Backside Color: White.
         13. Backside Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         14. Backside Top Finish: Acrylic.
      2. Physical Properties and Characteristics:
         1. Fabric Layer: Weft-inserted knit polyester design.
         2. Base Fabric Weight: 4.3 oz per sq yd (145 g per sq m).
         3. Finished Coated Weight per ASTM D751: 24.0 oz per sq yd, plus 2 to minus 1 oz pe sq yd (815 g per sq m, plus 70 to minus 35 g per sq m).
         4. Trapezoid Tear per ASTM D4533: 80/65 lbs (355/290 N).
         5. Grab Tensile per ASTM D751: 400/350 lb. (1780/1560 N).
         6. Strip Tensile per ASTM D751 Procedure B: 300/240 lbs per inch (2630/2100 N per 50 mm).
         7. Adhesion per ASTM D751 Dielectric Weld: 10 lbs per inch (90 N per 50 mm).
         8. Hydrostatic Resistance per ASTM D751 Procedure A: 500 psi (3.45 MPa).
         9. Dead Load Seam Strength per ASTM D751: 2 in (50 mm) Seam, 4 hr, 1 in (25 mm) Strip:

120 lbs at 70 degrees F (530 N at 21 degrees C).

60 lbs at 160 degrees F (270 N at 71 degrees C).

* + - * 1. Low Temperature - LTC per ASTM D2136 1/8 inch (3 mm) mandrel, 4 hour:

Pass at minus 40 degrees F (minus 40 degrees C).

Pass at minus 67 degrees F (minus 55 degrees C).

* + - * 1. Flame Resistance:

Meets NFPA 701; ULC-S109: 2 second flameout.

ASTM D6413-13: 2 second flameout.

Registered by California Fire Marshal; No. F-97701; ASTM E84 and ULC-S102:

Flame Spread Index: Less than or equal to 25.

Smoke Development Rating: Less than or equal to 450.

* + - * 1. Biaxial Stretch Test: Time Duration: 2 hours.

Warp and Fill Direction Loaded at 1:1 Ratio.

Fill Load: 75 lbs per inch (13.13 kN per m). Stretch: 7.28 percent.

Warp Load: 75 lbs per inch (13.13 kN per m). Stretch: 3.64 percent.

Warp and Fill Loaded at 1:2 Ratio.

Fill Load: 80 lbs per inch (14.01 kN per m). Stretch: 7.80 percent.

Warp Load: 40 lbs per inch (7.00 kN per m). Stretch: 1.04 percent.

Warp and Fill Loaded at 2:1 Ratio.

Fill Load: 40 lbs per inch (7.00 kN per m). Stretch: 2.08 percent.

Warp Load: 80 lbs per inch (14.01 kN per m). Stretch: 5.72 percent.

* + 1. Product: Architectural Fabric No. 8424 as manufactured by Shelter-Rite.

\*\* NOTE TO SPECIFIER \*\* Delete top finish, color, and backside color options not required.

* + - 1. Translucent Acrylic Top Finish:
         1. Color: DC-615 Translucent White. 10 percent translucent; 10 year warranty.
         2. Color: DC-6 White. 4 percent translucent; 10 year warranty.
         3. Backside Color: Same as exterior color.
         4. Backside Top Finish: Acrylic.
      2. Translucent PVDF Top Finish:
         1. Color: DC-615 Translucent White. 10 percent translucent; 10 year warranty.
         2. Color: DC-6 White. 4 percent translucent; 10 year warranty.
         3. Backside Color: Same as exterior color.
         4. Backside Top Finish: Acrylic.
      3. Translucent Brite-White Tedlar Top Finish:
         1. Color: DC-184 Translucent White; 10 percent translucent; 15 year warranty.
         2. Color: DC-615 Translucent White. 6 percent translucent; 15 year warranty.
         3. Color: DC-6 White. 3 percent translucent; 15 year warranty.
         4. Backside Color: Same as exterior color.
         5. Backside Top Finish: Acrylic.
      4. Opaque Acrylic Top Finish:
         1. Color: DC-6 White Opaque: 10 year warranty.
         2. Color: DC-24 Green. 10 year warranty.
         3. Color: DC-46 Royal Blue. 10 year warranty.
         4. Color: DC-42 Yellow. 10 year warranty.
         5. Color: DC-174 Vermillion Red. 10 year warranty.
         6. Color: DC-260 Forrest Green. 10 year warranty.
         7. Color: DC-4 Gray 10 year warranty.
         8. Color: DC-113 Beige. 10 year warranty.
         9. Color: DC-128 Sandstone 10 year warranty.
         10. Color: DC-146 Eggshell. 10 year warranty.
         11. Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         12. Backside Color: White.
         13. Backside Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         14. Backside Top Finish: Acrylic.
      5. Opaque PVDF Top Finish:
         1. Color: DC-6 White Opaque: 10 year warranty.
         2. Color: DC-24 Green. 10 year warranty.
         3. Color: DC-46 Royal Blue. 10 year warranty.
         4. Color: DC-42 Yellow. 10 year warranty.
         5. Color: DC-174 Vermillion Red. 10 year warranty.
         6. Color: DC-260 Forrest Green. 10 year warranty.
         7. Color: DC-4 Gray. 10 year warranty.
         8. Color: DC-113 Beige. 10 year warranty.
         9. Color: DC-128 Sandstone. 10 year warranty.
         10. Color: DC-146 Eggshell. 10 year warranty.
         11. Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         12. Backside Color: White.
         13. Backside Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         14. Backside Top Finish: Acrylic.

\*\* NOTE TO SPECIFIER \*\* Kynar top coating system is a fluoropolymer finish with great dirt resistance and colorfastness. The unique property with Kynar top coating system is that it can be made in any standard or custom color.

* + - 1. Opaque Kynar Top Coating.
         1. Color: DC-24 Green/Opaque/White. 10 year warranty.
         2. Color: DC-46 Royal Blue/Opaque/White. 10 year warranty.
         3. Color: DC-42 Yellow/Opaque/White. 10 year warranty.
         4. Color: DC-174 Vermillion Red/Opaque/White. 10 year warranty.
         5. Color: DC-260 Forrest Green/Opaque/White. 10 year warranty.
         6. Color: DC-4 Gray/Opaque/White. 10 year warranty.
         7. Color: DC-113 Beige/Opaque/White. 10 year warranty.
         8. Color: DC-128 Sandstone/Opaque/White. 10 year warranty.
         9. Color: DC-146 Eggshell/Opaque/White. 10 year warranty.
         10. Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         11. Backside Color: White.
         12. Backside Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         13. Backside Top Finish: Acrylic.

\*\* NOTE TO SPECIFIER \*\* Brite-White or colored Tedlar films provide the greatest resistance to dirt pick-up and are basically self-cleaning. The Shelter-Rite Tedlar products are extremely colorfast and are the only product backed by a 20 year warranty that covers dirt resistance and colorfastness. Terdlar colors are limited to what is listed below.

* + - 1. Opaque Tedlar PVF Top Coating.
         1. Color: Brite-White. 15 year warranty.
         2. Color: Granite Gray. 15 year warranty.
         3. Color: Sand Stone. 15 year warranty.
         4. Color: Spruce Green. 15 year warranty.
         5. Color: Misty Gray. 15 year warranty.
         6. Color: Dawn Gray. 15 year warranty.
         7. Color: Salem Blue. 15 year warranty.
         8. Color: High Sky. 15 year warranty.
         9. Color: Highway Green. 15 year warranty.
         10. Color: Bayberry 15 year warranty.
         11. Color: Desert Sand. 15 year warranty.
         12. Backside Color: White.
         13. Backside Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         14. Backside Top Finish: Acrylic.
      2. Physical Properties and Characteristics:
         1. Fabric Layer: Weft-inserted knit polyester design.
         2. Base Fabric Weight: 5.0 oz per sq yd (170 g per sq m).
         3. Finished Coated Weight per ASTM D751: 24.0 oz per sq yd, plus 2 to minus 1 oz per sq yd (815 g per sq m, plus 70 to minus 35 g per sq m).
         4. Trapezoid Tear per ASTM D4533: 50/60 lbs (23/267 N).
         5. Grab Tensile per ASTM D751: 375/350 lb. (1670/1560 N).
         6. Strip Tensile per ASTM D751 Procedure B: 300/275 lbs per inch (2630/2400 N per 50 mm).
         7. Adhesion per ASTM D751 Dielectric Weld: 10 lbs per inch (90 N per 50 mm).
         8. Hydrostatic Resistance per ASTM D751 Procedure A: 500 psi (3.45 MPa).
         9. Dead Load Seam Strength per ASTM D751; 2 in (50 mm) Seam, 4 hr, 1 in (25 mm) Strip:

106 lbs at 70 degrees F (470 N at 21 degrees C).

53 lbs at 160 degrees F (235 N at 71 degrees C).

* + - * 1. Low Temperature per ASTM D2136 1/8 inch (3 mm) mandrel, 4 hour:

LTC: Pass at minus 40 degrees F (minus 40 degrees C).

LTA: Pass at minus 67 degrees F (minus 55 degrees C).

* + - * 1. Flame Resistance:

Meets NFPA 701; ULC-S109: 2 second flameout.

ASTM D6413: 2 second flameout.

Registered by California Fire Marshal; No. F-10301; ASTM E84 and ULC-S102.

Flame Spread Index: Less than or equal to 25.

Smoke Development Rating: Less than or equal to 450.

* + - * 1. Biaxial Stretch Test: Time Duration: 2 hours.

Warp and Fill Direction Loaded at 1:1 Ratio.

Fill Load: 75 lbs per inch (13.13 kN per m). Stretch: 8.42 percent.

Warp Load: 75 lbs per inch (13.13 kN per m). Stretch: 4.34 percent.

Warp and Fill Loaded at 1:2 Ratio.

Fill Load: 60 lbs per inch (10.50 kN per m). Stretch: 8.59 percent.

Warp Load: 30 lbs per inch (5.25 kN per m). Stretch: 1.48 percent.

Warp and Fill Loaded at 2:1 Ratio.

Fill Load: 30 lbs per inch (5.25 kN per m). Stretch: 3.65 percent.

Warp Load: 60 lbs per inch (10.50 kN per m). Stretch: 3.99 percent.

* + 1. Product: Architectural Fabric No. 8520 as manufactured by Shelter-Rite.

\*\* NOTE TO SPECIFIER \*\* Delete top finish, color, and backside color options not required.

* + - 1. Translucent Acrylic Top Finish:
         1. Color: DC-615 Translucent White. 10 percent translucent; 10 year warranty.
         2. Color: DC-6 White. 4 percent translucent; 10 year warranty.
         3. Backside Color: Same as exterior color.
         4. Backside Top Finish: Acrylic.
      2. Translucent PVDF Top Finish:
         1. Color: DC-615 Translucent White. 10 percent translucent; 10 year warranty.
         2. Color: DC-6 White. 4 percent translucent; 10 year warranty.
         3. Backside Color: Same as exterior color.
         4. Backside Top Finish: Acrylic.
      3. Opaque Acrylic Top Finish:
         1. Color: DC-688 White Opaque: 10 year warranty.
         2. Color: DC-24 Green. 10 year warranty.
         3. Color: DC-46 Royal Blue. 10 year warranty.
         4. Color: DC-42 Yellow. 10 year warranty.
         5. Color: DC-174 Vermillion Red. 10 year warranty.
         6. Color: DC-260 Forrest Green. 10 year warranty.
         7. Color: DC-4 Gray 10 year warranty.
         8. Color: DC-113 Beige. 10 year warranty.
         9. Color: DC-128 Sandstone 10 year warranty.
         10. Color: DC-146 Eggshell. 10 year warranty.
         11. Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         12. Backside Color: White.
         13. Backside Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         14. Backside Top Finish: Acrylic.
      4. Opaque PVDF Top Finish:
         1. Color: DC-688 White Opaque: 10 year warranty.
         2. Color: DC-24 Green. 10 year warranty.
         3. Color: DC-46 Royal Blue. 10 year warranty.
         4. Color: DC-42 Yellow. 10 year warranty.
         5. Color: DC-174 Vermillion Red. 10 year warranty.
         6. Color: DC-260 Forrest Green. 10 year warranty.
         7. Color: DC-4 Gray. 10 year warranty.
         8. Color: DC-113 Beige. 10 year warranty.
         9. Color: DC-128 Sandstone. 10 year warranty.
         10. Color: DC-146 Eggshell. 10 year warranty.
         11. Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         12. Backside Color: White.
         13. Backside Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         14. Backside Top Finish: Acrylic.
      5. Physical Properties and Characteristics:
         1. Fabric Layer: Weft-inserted knit polyester design.
         2. Base Fabric Weight: 5.0 oz per sq yd (170 g per sq m).
         3. Finished Coated Weight per ASTM D751: 20.0 oz per sq yd, plus 2 to minus 1 oz per sq yd (680 g per sq m, plus 70 to minus 35 g per sq m).
         4. Trapezoid Tear per ASTM D4533: 50/50 lbs (220/220 N).
         5. Grab Tensile per ASTM D751: 400/400 lb. (1780/1780 N).
         6. Strip Tensile per ASTM D751 Procedure B: 325/325 lbs per inch (2850/2850 N per 50 mm).
         7. Adhesion per ASTM D751 Dielectric Weld: 10 lbs per inch (90 N per 50 mm).
         8. Hydrostatic Resistance per ASTM D751 Procedure A: 500 psi (3.45 MPa).
         9. Low Temperature per ASTM D2136 1/8 inch (3 mm) mandrel, 4 hour:

LTC: Pass at minus 40 degrees F (minus 40 degrees C).

* + - * 1. Flame Resistance:

Meets NFPA 701; ULC-S109: 2 second flameout.

ASTM D6413: 2 second flameout.

Registered by California Fire Marshal; No. F-97901; ASTM E84 and ULC-S102:

Flame Spread Index: Less than or equal to 25.

Smoke Development Rating: Less than or equal to 450.

* + - * 1. Biaxial Stretch Test: Time Duration: 2 hours.

Warp and Fill Direction Loaded at 1:1 Ratio.

Fill Load: 75 lbs per inch (13.13 kN per m). Stretch: 4.68 percent.

Warp Load: 75 lbs per inch (13.13 kN per m). Stretch: 3.64 percent.

Warp and Fill Loaded at 1:2 Ratio.

Fill Load: 50 lbs per inch (8.75 kN per m). Stretch: 2.86 percent.

Warp Load: 25 lbs per inch (4.38 kN per m). Stretch: 1.82 percent.

Warp and Fill Loaded at 2:1 Ratio.

Fill Load: 25 lbs per inch (4.38 kN per m). Stretch: 1.56 percent.

Warp Load: 50 lbs per inch (8.75 kN per m). Stretch: 2.60 percent.

* + 1. Product: Architectural Fabric No. 9032 as manufactured by Shelter-Rite.

\*\* NOTE TO SPECIFIER \*\* Delete top finish, color, and backside color options not required.

* + - 1. Translucent Acrylic Top Finish:
         1. Color: DC-615 Translucent White. 10 percent translucent; 15 year warranty.
         2. Color: DC-6 White. 4 percent translucent; 20 year warranty.
         3. Backside Color: Same as exterior color.
         4. Backside Top Finish: Acrylic.
      2. Translucent PVDF Top Finish:
         1. Color: DC-615 Translucent White. 10 percent translucent; 15 year warranty.
         2. Color: DC-6 White. 4 percent translucent; 20 year warranty.
         3. Backside Color: Same as exterior color.
         4. Backside Top Finish: Acrylic.
      3. Translucent Brite-White Tedlar Top Finish:
         1. Color: DC-184 Translucent White; 10 percent translucent; 20 year warranty.
         2. Color: DC-615 Translucent White. 6 percent translucent; 20 year warranty.
         3. Color: DC-6 White. 3 percent translucent; 20 year warranty.
         4. Backside Color: Same as exterior color.
         5. Backside Top Finish: Acrylic.
      4. Opaque Acrylic Top Finish:
         1. Color: DC-6 White Opaque: 20 year warranty.
         2. Color: DC-24 Green. 15 year warranty.
         3. Color: DC-46 Royal Blue. 15 year warranty.
         4. Color: DC-42 Yellow. 15 year warranty.
         5. Color: DC-174 Vermillion Red. 15 year warranty.
         6. Color: DC-260 Forrest Green. 15 year warranty.
         7. Color: DC-4 Gray 20 year warranty.
         8. Color: DC-113 Beige. 20 year warranty.
         9. Color: DC-128 Sandstone 20 year warranty.
         10. Color: DC-146 Eggshell. 20 year warranty.
         11. Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         12. Backside Color: White.
         13. Backside Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         14. Backside Top Finish: Acrylic.
      5. Opaque PVDF Top Finish:
         1. Color: DC-6 White Opaque: 20 year warranty.
         2. Color: DC-24 Green. 15 year warranty.
         3. Color: DC-46 Royal Blue. 15 year warranty.
         4. Color: DC-42 Yellow. 15 year warranty.
         5. Color: DC-174 Vermillion Red. 15 year warranty.
         6. Color: DC-260 Forrest Green. 15 year warranty.
         7. Color: DC-4 Gray. 20 year warranty.
         8. Color: DC-113 Beige. 20 year warranty.
         9. Color: DC-128 Sandstone. 20 year warranty.
         10. Color: DC-146 Eggshell. 20 year warranty.
         11. Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         12. Backside Color: White.
         13. Backside Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         14. Backside Top Finish: Acrylic.

\*\* NOTE TO SPECIFIER \*\* Kynar top coating system is a fluoropolymer finish with great dirt resistance and colorfastness. The unique property with Kynar top coating system is that it can be made in any standard or custom color.

* + - 1. Opaque Kynar Top Coating.
         1. Color: DC-24 Green. 10 year warranty.
         2. Color: DC-46 Royal Blue. 10 year warranty.
         3. Color: DC-42 Yellow. 10 year warranty.
         4. Color: DC-174 Vermillion Red. 10 year warranty.
         5. Color: DC-260 Forrest Green. 10 year warranty.
         6. Color: DC-4 Gray. 10 year warranty.
         7. Color: DC-113 Beige. 10 year warranty.
         8. Color: DC-128 Sandstone. 10 year warranty.
         9. Color: DC-146 Eggshell. 10 year warranty.
         10. Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         11. Backside Color: White.
         12. Backside Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         13. Backside Top Finish: Acrylic.

\*\* NOTE TO SPECIFIER \*\* Brite-White or colored Tedlar films provide the greatest resistance to dirt pick-up and are basically self-cleaning. The Shelter-Rite Tedlar products are extremely colorfast and are the only product backed by a 20 year warranty that covers dirt resistance and colorfastness. Terdlar colors are limited to what is listed below.

* + - 1. Opaque Tedlar PVF Top Coating.
         1. Color: Brite-White. 20 year warranty.
         2. Color: Granite Gray. 20 year warranty.
         3. Color: Sand Stone. 20 year warranty.
         4. Color: Spruce Green. 20 year warranty.
         5. Color: Misty Gray. 20 year warranty.
         6. Color: Dawn Gray. 20 year warranty.
         7. Color: Salem Blue. 20 year warranty.
         8. Color: High Sky. 20 year warranty.
         9. Color: Highway Green. 20 year warranty.
         10. Color: Bayberry 20 year warranty.
         11. Color: Desert Sand. 20 year warranty.
         12. Backside Color: White.
         13. Backside Color: Custom color as determined by the Architect and reviewed by the manufacturer.
         14. Backside Top Finish: Acrylic.
      2. Physical Properties and Characteristics:
         1. Fabric Layer: Weft-inserted knit polyester design.
         2. Base Fabric Weight: 10.0 oz per sq yd (340 g per sq m).
         3. Finished Coated Weight per ASTM D751: 32.0 oz per sq yd, plus 2 to minus 1 oz per sq yd (1085 g per sq m, plus 70 to minus 35 g per sq m).

Average Weight of Opaque Fabrics: 4 oz per sq yd (140 g per sq m) heavier.

* + - * 1. Trapezoid Tear per ASTM D4533: 100/100 lbs (445/445 N).
        2. Grab Tensile per ASTM D751: 840/840 lb. (3740/3740 N).
        3. Strip Tensile per ASTM D751 Procedure B: 650/650 lbs per inch (5700/5700 N per 50 mm).
        4. Adhesion per ASTM D751 Dielectric Weld: 10 lbs per inch (90 N per 50 mm).
        5. Hydrostatic Resistance per ASTM D751 Procedure A: 500 psi (3.45 MPa).
        6. Dead Load Seam Strength per ASTM D751; 2 in (50 mm) seam, 4 hr, 1 in (25 mm) strip:

266 lbs at 70 degree F (1180 N at 21 degrees C).

133 lbs at 160 degree F (590 N at 71 degrees C).

* + - * 1. Low Temperature per ASTM D2136 1/8 inch (3 mm) mandrel, 4 hour:

LTC: Pass at minus 40 degrees F (minus 40 degrees C).

LTA: Pass at minus 67 degrees F (minus 55 degrees C).

* + - * 1. Flame Resistance:

Meets NFPA 701 and ULC-S109: 2 second flameout. Pass.

ASTM D6413: 2 second flameout. Pass.

Registered by California Fire Marshal; No. F-95301.

* + - * 1. Biaxial Stretch Test: Time Duration: 2 hours.

Warp and Fill Direction Loaded at 1:1 Ratio.

Fill Load: 75 lbs per inch (13.13 kN per m). Stretch: 7.03 percent.

Warp Load: 75 lbs per inch (13.13 kN per m). Stretch: 2.95 percent.

Warp and Fill Loaded at 1:2 Ratio.

Fill Load: 60 lbs per inch (10.50 kN per m). Stretch: 8.51 percent.

Warp Load: 30 lbs per inch (5.25 kN per m). Stretch: 0.78 percent.

Warp and Fill Loaded at 2:1 Ratio.

Fill Load: 30 lbs per inch (5.25 kN per m). Stretch: 4.17 percent.

Warp Load: 60 lbs per inch (10.50 kN per m). Stretch: 5.21 percent.

1. EXECUTION
   1. EXAMINATION
      1. Do not begin installation until substrates have been properly constructed and prepared.
      2. If substrate preparation is the responsibility of another installer, notify Architect in writing of unsatisfactory preparation before proceeding.
   2. PREPARATION
      1. Clean surfaces thoroughly prior to installation.
      2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
   3. INSTALLATION
      1. Install in accordance with manufacturer's instructions, approved submittals, and in proper relationship with adjacent construction.
   4. FIELD QUALITY CONTROL
      1. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.

\*\* NOTE TO SPECIFIER \*\* Include if manufacturer provides field quality control with onsite personnel for instruction or supervision of product installation, application, erection or construction. Delete if not required.

* + 1. Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.
  1. CLEANING AND PROTECTION
     1. Clean products in accordance with the manufacturers recommendations.
     2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION