



Fabrics for Architectural Structures

Shelter-Rite®
ARCHITECTURAL FABRICS
BY SEAMAN CORPORATION



MADE IN THE
USA



Seaman Corporation

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Seaman Corporation

World Leader in the Manufacturing of Industrial Coated Fabrics since 1949

Seaman Corporation, manufactures Shelter-Rite® Architectural Fabrics. A vertically integrated company, Seaman Corporation develops proprietary formulations, knits, weaves, and coats fabric in two U.S.-based plants.

Seaman Corporation's leadership in the Architectural Fabrics Market dates back to the mid-1950s. 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.

In addition to Shelter-Rite® Architectural Fabrics, Seaman Corporation also produces high performance FiberTite® Roof Systems, XR® Geomembrane Liners, Shelter-Rite® Truck Tarps, Shelter-Rite® Dock Seals, and military fabrics used for flexible fuel and water tanks, and military tents.



Company and History

The company is founded in Canal Fulton, Ohio by Norman Seaman

Seaman opens its Building System Division to fabricate structures in 1966

Seaman is awarded patent for its Portomod Tension Fabric Structure
Image: original US Patent, 1972

1949 1955 1960 1965 1970 1975 1980 1985

Production of Shelter-Rite® Architectural Fabrics begins
Pictured: Holmesville, Ohio weaving mill

The first Tedlar® coated Architectural Fabric is produced by Seaman Corporation in 1970

In 1986, a new corporate headquarters and manufacturing plant is opened in Wooster, Ohio
Pictured: Seaman Corporation's corporate headquarters, circa 1986

Where Our Fabrics Are Used



Air-Supported Structures

Buildings that are created by using an exterior architectural membrane which is supported by interior air pressure. The architectural membrane is attached at the perimeter (usually at ground level) and the building is inflated with the use of air blowers; there are no frames used. Air structures require high strength materials.

Shelter-Rite styles 8028 and 9032 are typically used.



Pre-Engineered Frame Structures

Fabric buildings that start with either a steel or aluminum frame that is then covered with an architectural membrane. The metal frames are either arches or trusses that are engineered to be a certain length and designed to be spaced a certain distance from one another. Depending on how these Pre-Engineered buildings are designed the strength requirements for the architectural membrane can vary.

Shelter-Rite styles 8520, 8324, and 8028 are typically used.



Custom Designed Tension Structures

High profile fabric structures that start with an Architect's concept and ends up as custom, one-of-a-kind buildings. Examples of Custom Designed Tension Structures include stadiums, amphitheaters, and canopies. Because of the wide range in building sizes, the Architectural Membrane used on these buildings can range from low strength to very high strength.

Shelter-Rite 8324, 8028, and 9032 are typically used, almost always with Tedlar PVF film

Fabrics for Architectural Structures



Seaman Corporation celebrates 50 years of business in 1999

Seaman Corporation introduces Kynar® coated Architectural Fabrics in 2011



1990 1995 2000 2005 2010 2015 2020 2025



Seaman begins selling Tedlar® coated Architectural Fabrics into China in 2008
Pictured: Sun Park tennis domes, Beijing, China



Seaman broadens its product line in 2015 with Shelter-Rite Tent fabric
Pictured: Clearspan for Azimut Yachts, Fort Lauderdale Boat Show



Fabric Strength Considerations

Seaman Corporation Offers a Range of High-Performance Architectural Fabric Materials

Fabric tensile strength is the first consideration when selecting an architectural fabric. A structural engineer will determine the maximum loads (wind, snow, dead loads) on the building and then apply the appropriate safety factor to determine the minimum tensile strength needed.

Seaman Corporation offers a wide range of fabric tensile strengths, ideal for varying applications.

		Type I	Type II	Type III
		style 8520	style 8028	style 9032
Weight		20 oz/yd ²	28 oz/yd ²	32 oz/yd ²
ASTM D751		(680 g/m ²)	(950 g/m ²)	(1085 g/m ²)
Strip Tensile		325 lb_f/in	515 lb_f/in	650 lb_f/in
ASTM D751		2580 N/5 cm	4500 N/5 cm	5700 N/5 cm
Trap Tear		50 lb _f	85 lb _f	100 lb _f
ASTM D751		(220 N)	(380 N)	(445 N)
Adhesion		10 lb _f /in	10 lb _f /in	10 lb _f /in
ASTM D751 Dielectric Weld		(90 N/5 cm)	(90 N/5 cm)	(90 N/5 cm)
Low Temperature	LTC	Pass -40° F (-40° C)	Pass -40° F (-40° C)	Pass -40° F (-40° C)
ASTM D2136 1/8" mandrel, 4 hr	LTA	not offered	Pass -67° F (-55° C)	Pass -67° F (-55° C)
Flame Resistance	ASTM E84 Class A	Pass	Pass	
	California Fire Marshall	Pass	Pass	Pass
	NFPA 701	Pass	Pass	Pass
	EN 13501-1		B-s2, d0	B-s2, d0

Sample specifications shown.
Ask our representatives for details on our full range of fabrics.

Light Transmission & Color Options

White Shelter-Rite Fabric Can be Produced at Different Light Transmission Levels

The standard products can be made to have high light transmission (6% to 10%); low light transmission (3% to 5%); or completely opaque.


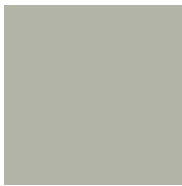

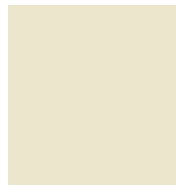



If heat gain inside the building is a concern then opaque white fabric is the best option.

	style 8520	style 8028	style 9032
DC184 Translucent White/BW Tedlar	not offered	10%	10%
DC6 White	4%	4%	4%
DC6/OP/DCS White/Opaque/White	0%	0%	0%

Percent light transmission is measured using a MacBeth Colorimeter and is approximate in the 400nm to 700nm visible light range. Seaman Corporation Technical Department should be consulted for product applications.

Available in Standard or Custom Color Options

Colors are produced with an opaque layer and either a white interior or matching interior color.

Standard Colors, 20-year warranty DC-6 White DC-4 Gray DC-113 Beige DC-128 Sandstone DC-146 Eggshell					
Standard Colors, 10-year warranty DC-24 Green DC-46 Royal Blue DC-42 Yellow DC-174 Vermillion Red DC-260 Forrest Green					

Note: color charts are approximations only and are not recommended for accurate color matching. Due to limitations of digital color reproduction and printing conditions, colors shown here may vary from actual membrane colors.

Shelter Rite Architectural fabrics can also be produced in a wide variety of custom colors to meet specific architectural requirements. Submit a color sample or specify a color chip to receive a color match.

ArchitecturalFabrics.com/contact-us

Aesthetics & Top Finishes

Long-term Aesthetics of Fabric Structures Depend on the Top Finish System

All structures will look great when new, but the long-term aesthetics of a fabric building will be greatly affected by dirt pick-up and any color fading. Dirt pick up is controlled by the quality of the top finish system that is applied to the material. Color fading depends on the pigment selection in the PVC compound combined with the level of protection the top finish system can provide.



Shelter-Rite Architectural Fabric Top Coating Systems

Tedlar®: Brite-White Tedlar 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.

Kynar®: Kynar top coating system is another fluoropolymer finish with great dirt resistance and colorfastness. The unique property with Kynar top coating system is that it can be made in any custom color.

PVDF and Acrylic Top Finish: Solution applied PVDF or Acrylic top finish provide a basic level of dirt resistance. Both finishes have a reasonable life expectancy.

	Acrylic	PVDF	Kynar®	Tedlar®
Retention of Color	●●●	●●●	●●●●	●●●●●
Retention of Gloss	●●●	●●●●	●●●●	●●●●
Stain Resistance	●●	●●●	●●●●●	●●●●●
Dirt Pick-up	●●●	●●●	●●●●	●●●●●
Mildew Resistance	●●●	●●●	●●●●●	●●●●●
Resistance to Environmental Pollutants	●	●●	●●●●●	●●●●●
Cleanability	●●●	●●●	●●●●●	●●●●●
Overall Life Expectancy <small>*based on field performance</small>	●●●	●●●	●●●●●	●●●●●

Scale: Good ●●●●● Best

Top Finish Options



Tedlar®

The use of Brite-White or colored Tedlar films provide the greatest resistance to dirt pick-up; the longest colorfastness; and best UV protection for any architectural fabric. The Brite-White Tedlar can be applied to translucent or opaque materials.

Colored Tedlar is available in the following 10 colors:



Seaman Corporation offers the only line of 10 DuPont™ Tedlar® (PVF) film color for the entire line of Shelter-Rite Architectural Products.

(top row, left to right):

Granite Gray, Sand Stone, Spruce Green, Misty Gray, Dawn Gray

(bottom row, left to right):

Salem Blue, High Sky, Highway Green, Bayberry, & Desert Sand.



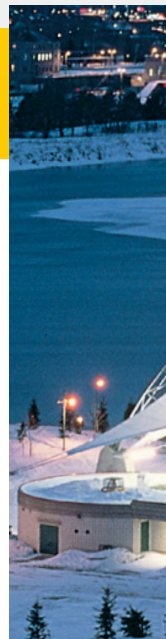
Kynar®

The Kynar top coating is a fluoropolymer finish, similar to Tedlar, except with the ability to be made in any custom color. Kynar coatings have excellent dirt resistance and generally great colorfastness; dependent on color selected.



PVDF and Acrylic Top Finish

PVDF or acrylic finishes offer aesthetic protection while maintaining the weldability of the material. PVDF and acrylic top finishes are transparent so they can be applied to any color of PVC coated fabric.



Top Row:

Boston Logan Airport Hangar
2001 by Rubb Building Systems, Inc.
Roberta Bondar Park, Sault Ste Marie, Ontario
1992 by Birdair, Inc.
Westin Bear Mountain Resort, Victoria, British Columbia
2018 by The Farley Group

Center Row:

Verizon Wireless Amphitheatre at Encore Park
2008 by KKE Architects, Minneapolis
Martensville Athletic Pavilion, Martensville, Saskatchewan 2013 by Sprung Structures
The Nautica Stage in Cleveland, Ohio 2004 by Fabrtitec LLC, Tensys Consultants, LTD.,
& Sundance Awnings (Sundance Architectural Products)

Bottom Row:

Roanoke City Schools, Preston Park Elementary 2012 by Sprung Structures
Arizona Cardinals Practice Dome, Tempe, Arizona 2013 by Yeadon Fabric Structures
Van Wezel Performing Arts Center Awning 2019 by Lightweight Manufacturing & Signature Structures



Every architectural project is unique.
No matter the scope or application, Seaman has a fabric solution.
Browse some of our past projects at:

ArchitecturalFabrics.com/gallery





www.ArchitecturalFabrics.com



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 Kynar® is the trademark property of Arkema, Inc.

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