



HIRAOKA PVF SERIES



Since in 1902, we are a pioneer of tent sheets

We set new standards with our innovative production techniques and processing technology. Hiraoka applies high quality polymer coatings to various textiles to produce specialized membranes for a wide range of applications. Our long years of experience allows us to meet the demands of our customers and society.

Hiraoka commenced business in 1902 and was originally scouring and dyeing cotton and hemp products. Our mission is to design and develop a range of products that reflect the changing demands of our customers and the environments in which we live. Currently, we supply a range of creative membrane fabrics, including specialized materials for architectural structures, to all over the world.

ACCREDITATION

Our ISO 9001 compliant Quality Management System ensures absolute quality, consistency, and customer satisfaction. Our business system are accredited by the United Kingdom Accreditation Service (UKAS).



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CERTIFICATION

We offer clients the professional services of an in-house team of registered, practising engineers. It's another quality assurance that ensures we deliver full certification that meet all international standards.

SUSTAINABILITY

We proudly support many ecological initiatives. Our Research & Development Division continue to produce newer and greener products.

Line-up

		Type-I	Type-II	Type-III	Type-IV
Item		102T-PVF(G)	212T-PVF(G)	313T-PVF(G)	412T-PVF(G)
Scrim (Dtex)		1100	1670	1670/2	2200/2
Width (cm) *1	ASTM D-751	204	204	204	204
Weight (g/m²)	ASTM D-751	800	940	1100	1470
Tensile strength (daN/5cm)	ASTM D-751	W : 310 F : 310	W : 450 F : 450	W : 610 F : 590	W : 830 F : 700
Tear strength (daN)	ASTM D-751	W : 18 F : 18	W : 40 F : 40	W : 61 F : 60	W : 95 F : 90
Adhesion (daN/5cm)	ASTM D-751	8	12	14	15
Transmittance (%) *2	JIS Z 8722	8	7.5	6.5	3.5
Surface Finish		DuPont™ Tedlar® PVF Film			
Appearance *3		Low Gloss Finish			
Warranty (year)		20	20	20	20

*1, *2, *3 : Narrow width, Block out type, Matte finish are available upon request. Please contact our sales representatives.

Appended table		Surface Finish (Appearance)	Type-I	Type-II	Type-III	Type-IV
Transmittance (%)	(G); Gloss	DuPont™ Tedlar® PVF Film (Low Gloss Finish)	8	7.5	6.5	3.5
	(M); Matte	DuPont™ Tedlar® PVF Film (Matte Finish)	1	1	1	0.5
	(B); Blockout	DuPont™ Tedlar® PVF Film (Low Gloss Finish)	0	0	0	0

The above data represent measured values and are not guaranteed values. The contents in this catalog may be altered for making improvements without prior notice.

DuPont™ and Tedlar® are trademark or registered trademark of E. I. du Pont de Nemours and Company or its affiliates.

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HIRAOKA PVF S



102T-PVF (G)



212T-PVF (G)



313T-PVF (G)



412T-PVF (G)



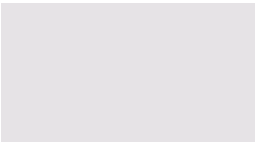
212T-PVF (M)



212T-PVF (B)

Custom Colors

All other colors or color combinations are available, HIRAOKA can custom match your colors on all of our PVF series. Our Custom Color program focuses on matching your desired specifications.



Shell White



Dawn Gray



Granite Gray



Concord Cream



Desert Sand



Spruce Green

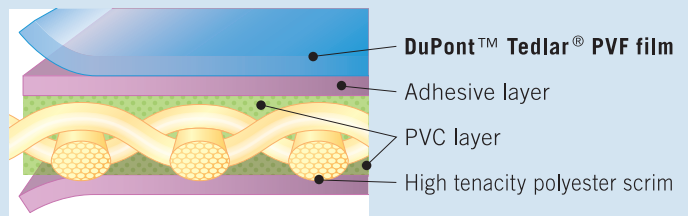


Salem Blue

Durable and Aesthetic Material with a Long-term Warranty

The HIRAOKA PVF series was developed for membrane construction. The lasting weatherability and aesthetic design make it possible to maintain construction. The surface of the membrane materials used for this series is laminated with Tedlar films, which prevent the yellowing of membrane materials and cracking on the surface. The contamination resistance of these films protects membrane materials from bird droppings, dust, harmful gases, acid rain, and other types of contamination. Any such dirtying of the surface can easily be rinsed off by rain, which leads to lower maintenance costs compared to other membrane materials. The HIRAOKA PVF series can be used for various permanent structures.

Composition of HIRAOKA PVF series

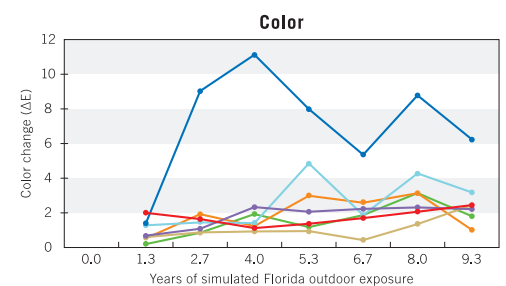
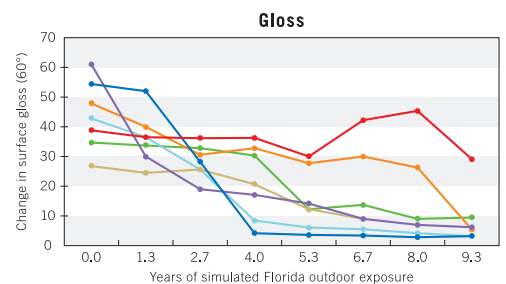
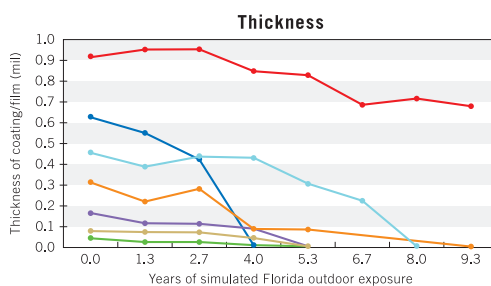


* Tedlar® is the trademark property of E. I. du Pont de Nemours and Company or its affiliates.

Excellent weatherability of DuPont™ Tedlar® Film - Accelerated aging and UV exposure test

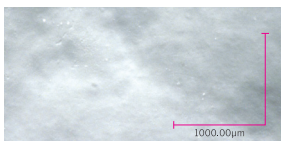
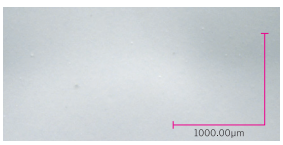
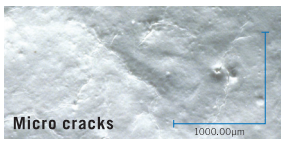

As test results show, compared with the surface protection coatings such as acrylic and PVDF, DuPont™ Tedlar® film can better resist UV and acid rain, prevent dust buildup, as well as keep its thickness, color and gloss for a longer time, thus maintaining the building's original appearance for longer.

*Reprinted from DuPont™ Tedlar® Film Brochure (by courtesy of Du Pont Kabushiki Kaisha)



Excellent weatherability

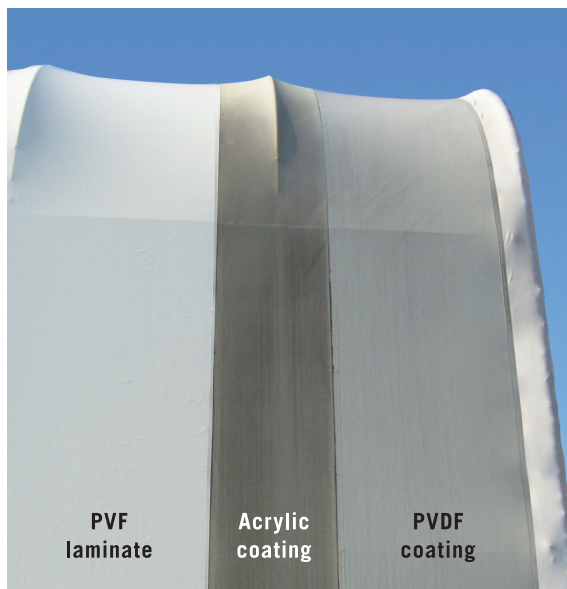
The HIRAOKA PVF series does not experience any yellowing or cracking even after an accelerated weathering test simulating 22 years of use.

Product	Competitor's fabric	HIRAOKA PVF series
Finish type	PVDF coating (non weldable)	Tedlar® film (non weldable)
After accelerating – 360H 4 year outdoor exposure Eq.		
After accelerating – 2160H 22 year outdoor exposure Eq.	 Micro cracks	 No micro cracks

Lasting aesthetic appearance

The photograph below compares three kinds of membrane materials with antifouling treatment (PVF laminate, acrylic coating, and PVDF coating) after 15 years of use.

Even 15 years after installation, the PVF laminate (HIRAOKA PVF series) on the left-hand side still retains its original appearance.



Lasting resistance against dirt

Photo of a sample installed southward in an outdoor exposure test

Test location: Saitama Prefecture, Japan



The PVF film retains a clean surface even after 10 years of exposure.

Matte finish suited for urban application

The membrane blends into townscapes thanks to the soft matte finish.



Main features

- Remarkable weatherability
- Lasting aesthetic appearance
- Easy to clean
- Semigloss finish
- REACH compliant
- 20-year warranty

Applications

- Air domes
- Roof structures
- Tension structures