

DeWAL® High-Performance Films and Foils for Elastomeric and Convuluted Hose

Designers and engineers face ever-growing and demanding hose design performance specifications, ranging from optimizing operating temperatures, pressure and tensile strength, to chemical and abrasion resistance and electrostatic dissipation.

Laminate technology is used in hose design to combine dissimilar materials that each offer unique benefits. Both UHMW and PTFE laminates can be used as internal and external surfaces.

Benefits:

Lightweight and Tight



Precision calendering and skiving capabilities produce a lightweight, thin skived film as low as 1 mil for PTFE and 3 mil for UHMW-PE typically.

Extreme Temperature Stability



Material maintains high performance in extreme temperatures up to 260 °C (500 °F) for PTFE and 93° (200 °F) for UHMW-PE.

FDA Compliance



Many PTFE Films meet FDA CFR21 177.1550, UHMW films meet FDA CFR 177.1520.

Strength and Durability

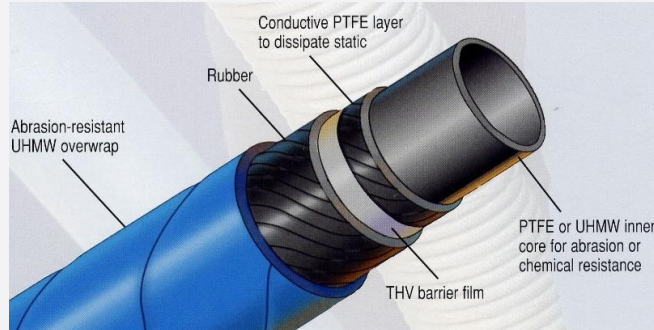


Films are resistant to high abrasion and low friction, promoting extremely low wear and extended hose life.

Static Dissipation



Materials can be compounded to conduct electricity and dissipate static charges within the hose.



Comprised of high-performance PTFE and UHMW, DeWAL® skived films and foils are engineered for premium abrasion resistance, durability, and chemical resistance. Being chemically inert, they are resistant to a wide range of chemicals, refrigerants, and solvents, making the films and foils an ideal solution for hose applications such as liners in chemical transfer and convoluted hoses, inner liners, permeation barriers and abrasion resistant outer wraps for chemical hoses, and so much more.

DeWAL skived films and foils are available in a range of resin type, colors, sizes, roll lengths, and widths. Offered in a variety of surface treatments to enhance bondability between the substrate and hose structures, materials can quickly be customized to meet specific application needs.

Visit the DeWAL Product Properties Guide for the full material portfolio:

<https://tools.rogerscorp.com/ems/dewal/properties/index.aspx>



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Treatments	UHMW-PE	PTFE	Al Foils
Corona Treatment	X		
Tensilizing (Calendering)	X	X	
Sodium Naphthalene Etching		X	
*Sodium Ammonia Etching		X	
PTFE Paint Coating			X

Surface modified materials are offered with a wide range of primers and other bond enhancing materials to improve bonding to hose linings and covers. Tensilized materials offer improved tensile strength and reduced elongation.

Grade	Material	Product	Thickness Range, mm (in) ASTM-D374	Max Width, mm (in)	Comments
Skived PTFE	Conductive, carbon filled PTFE Film	DW103	0.076-1.0 (0.003-0.04)	1270 (50)	
		DW105	0.508-1.0 (0.002-0.04)		
	Modified PTFE Film	DW218	0.0254-1.575 (0.001-0.062)		
		DW219	0.0254-1.575 (0.001-0.062)		Meets FDA 21CFR 177.1550. *Available as DW219AE, and a conductive version DW219C
		DW220	0.0254-1.016 (0.001-0.04)		*Available as DW220AE
	Virgin PTFE Film	DW2000	0.0254-1.02 (0.001-0.04)		Meets FDA 21CFR 177.1550
		DW202	0.0254-1.575 (0.001-0.062)		Meets FDA 21CFR 177.1550
	Virgin PTFE Film Sodium Naphthalene etched on 1 Side	DW212	0.0254-1.575 (0.001-0.062)		Meets FDA 21CFR 177.1550
	Virgin PTFE Film Sodium Ammonia etched on 1 Side	DW216	0.05081.575 (0.002-0.062)		
Pressure Sensitive Tapes	Aluminum foil coated with PTFE	DW350	0.13208 (0.0052) only	304.8 (12)	Available in clear (CL) and green (GR) versions
	Aluminum foil coated with Green PTFE	DW351-5GR	0.13208 (0.0052) only		Additionally coated with 2 mil layer of silicone adhesive
Skived UHMW-PE	Tensilized Natural UHMW-PE Film	DW400	0.508-1.575(0.002-0.062)	1397 (55)	
	Black, Non-Conductive, Tensilized UHMW-PE Film	DW400BNC	0.1016 (0.004) only		
	Natural UHMW-PE Film	DW401	0.508-1.575(0.002-0.062)		Meets FDA 21CFR 177.1520
		DW402	0.076-1.575(0.003-0.062)		Meets FDA 21CFR 177.1520
	Conductive, carbon filled UHMW-PE Film	DW402B	0.076-1.0 (0.003-0.04)		Meets FDA 21CFR 177.1520
	UV filled UHMW-PE Film	DW402UV	0.076-1.575(0.003-0.062)		
	Non-Conductive, carbon filled UHMW-PE Film	DW405BNC	0.076-1.635(0.003-0.025)		Meets FDA 21CFR 177.1520
	Carbon filled UHMW-PE Film	DW406BF	0.127-1.016(0.005-0.04)		Meets FDA 21CFR 177.1520
TiO2 filled UHMW-PE Film	DW406WF	0.127-1.016(0.005-0.04)	Meets FDA 21CFR 177.1520		
Unsintered Film	Unsintered PTFE	DW203	0.0508-1.508(0.002-0.02)	Product Dependent	Available unpigmented and pigmented to match EIA colors.

To request a material sample, please contact the Rogers Solutions Center at solutions@rogerscorp.com



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