

# VERSIV™

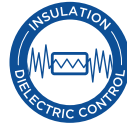
## UMHW PE FILMS

# BLACK SEMI-CONDUCTIVE

**BLACK UHMW SEMI-CONDUCTIVE** PE film is a high quality abrasion resistant film engineered to meet the most rigorous industrial applications. It is more than 5 times abrasion resistant than stainless steel and has self-lubricating properties similar to PTFE.

*\*Previously known as*

**CHEMFILM® BLACK UHMW SEMI-CONDUCTIVE**



### FEATURES AND BENEFITS

- Semi-conductive
- Abrasion resistant anti-stick surface
- Self-lubricating
- Durable
- Sound deadening material
- UV Resistant
- Continuous operating temperature up to 392°F (200°C)
- RoHS and REACH compliant

### AVAILABILITY

- Widths up to 54" (1,372 mm) on industry standard 3" (76 mm) ID cores
- Also supplied in narrow slit widths on jumbo traverse wound rolls with spliced lengths up to 6,562 linear yards (6,000 linear meters).
- Customized solutions available

\*Pictures shown are for illustration purpose only.



Partnerships that inspire.  
Materials that perform.

SAINT-GOBAIN COMPOSITE SOLUTIONS



### APPLICATIONS

- Automotive window channel
- Guide rails
- Work station surfaces
- Automotive noise abatement
- Conveyor bed liners
- Chute liners
- Protection against UV exposure
- High wear surfaces

The Saint-Gobain logo, featuring a stylized bar chart with four bars of increasing height in blue, red, and orange, above the text "SAINT-GOBAIN" in blue.

SAINT-GOBAIN

## TYPICAL PROPERTIES

Thickness	2.0 mil	3.0 mil	5.0 mil	10.0 mil	20.0 mil	Unit
Long Tensile	5,500	6,000	6,000	6,000	6,000	psi
Elongation (minimum)	200	300	300	300	300	%
Specific Gravity	0.93 - 1.00	0.93 - 1.00	0.93 - 1.00	0.93 - 1.00	0.93 - 1.00	g/cm <sup>3</sup>
Approximate Yield	101.0	68.0	40.5	20.2	10.1	ft <sup>2</sup> /lb

The values presented are typical values and should not be used for specification purposes. Contact your Saint-Gobain Composite Solutions representative for more information.

## CONTACT SAINT-GOBAIN COMPOSITE SOLUTIONS



### Americas

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**WARRANTY:** We warranty specifications at delivery and honor claims for such breach of warranty for six (6) months after delivery. The only obligation under any applicable product warranty will be to replace any portion proving defective, or at our option, to refund the purchase price thereof. User assumes all other risks, if any, including the risk of injury, loss or damage, whether direct or consequential arising out of the use, misuse or inability to use this product(s). SAINT-GOBAIN COMPOSITE SOLUTIONS DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

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## SKIVED FILMS

# UMHW PE

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*\*Previously known as*  
**CHEMFILM® UHMW PE FILM**



### FEATURES AND BENEFITS

- Abrasion resistant anti-stick surface
- Self-lubricating
- Durable
- Sound deadening material
- Acceptable for direct food contact
- Continuous operating temperature up to 392°F (200°C)
- RoHS and REACH compliant

### AVAILABILITY

- Widths up to 54" (1,372 mm) on industry standard 3" (76 mm) ID cores
- Also supplied in narrow slit widths on jumbo traverse wound rolls with spliced lengths up to 6,000 linear yards
- Customized solutions available

### APPLICATIONS

- Automotive window channel
- Sound deadening
- High wear surfaces
- Guide rails
- Work station surfaces

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Elongation (minimum)	200	300	300	300	300	%
Specific Gravity	0.93 - 1.00	0.93 - 1.00	0.93 - 1.00	0.93 - 1.00	0.93 - 1.00	g/cm <sup>3</sup>
Approximate Yield	101.0	68.0	40.5	20.2	10.1	ft <sup>2</sup> /lb
Dielectric Strength*	45	45	45	45	45	kV/mm
Surface Resistivity*	>10 <sup>12</sup>	>10 <sup>12</sup>	>10 <sup>12</sup>	>10 <sup>12</sup>	>10 <sup>12</sup>	Ω
Melting Point DCS*	130 - 135	130 - 135	130 - 135	130 - 135	130 - 135	10K/min °C
Ball Indentation Hardness 132/60, 30 sec value*	35	35	35	35	35	N/mm <sup>2</sup>
Hardness 15 sec value*	61	61	61	61	61	«Shore D»
Coefficient of Friction at RT on mild steel*	Static: 0.15 - 0.20					
	Dynamic: 0.12 - 0.20					

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**SKIVED FILMS**

**UMHW-PE**

**SAINT-GOBAIN** offers a broad range of Skived Films. The process chain includes skiving and slitting which is certified according to IATF 1649 and ISO 9001, guaranteeing a consistent high product quality.

Skived UMHW-PE Films are commonly used in applications with general requirements, such as release, non-stick or improved robustness.

Skived UMHW-PE Films come with higher abrasion resistance, offering higher durability for mechanical stresses, whilst also providing self-lubricating properties similar to Skived PTFE Films. Their anti-stick surface and sound deadening properties make them a preferred choice for demanding applications.

Skived UMHW-PE Films are bondable without etching, e.g. through thermal activation or with the use of a bonding agent.

*\*Previously known as*  
**CHEMFILM® SKIVD UHMW-PE FILMS**



**FEATURES AND BENEFITS**

- High abrasion resistance/durability
- Continuous service temperature up to 90°C
- Self-lubricating properties similar to PTFE
- Anti-stick surface
- Sound deadening
- Bondable without etching

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**AVAILABILITY**

- Widths up to 1500 mm
- Thickness down to 75 µm
- Special thicknesses, widths or other requirements are available upon request

**APPLICATIONS**

- Tank Liners
- Elastomer Laminates
- Gas & Liquid tight barrier in storage tanks including those working at very low temperatures
- Release materials in industrial applications with high wear and abrasion
- Low friction & anti-squeak in automotive and industrial machinery

### TYPICAL PROPERTIES

Property	UMHW-PE, natural	UMHW-PE, black	Unit	Test Method
Thickness	0.075 - 1.5	0.075 - 1.5	mm	-
Tensile Strength	≥ 30	≥ 30	N/mm <sup>2</sup>	DIN EN ISO 527 v = 50 mm/min microtensile specimen (according to ISO 13000)
Elongation at break	≥ 180	≥ 180	%	DIN EN ISO 527 v = 50 mm/min microtensile specimen (according to ISO 13000)
Filler content	None	< 5	% by weight	Thermal Gravimetric Analysis
Appearance / Color	White	Black	-	-

Property	Value	Test Method
Density	0.91 - 0.97 g/cm <sup>3</sup>	DIN EN ISO 1183-1
Surface finish	R <sub>t</sub> ≤ 10 μm	DIN EN ISO 4288
Dielectric breakdown strength*	45 kV/mm for unfilled materials	ASTM D-149 thickness 0.05 - 0,5mm
Ball indentation hardness 132/60*	≥ 34 N/mm <sup>2</sup> for unfilled materials	DIN EN ISO 2039-1 thickness min 4mm
Coefficient of friction**	0.10	-

The values presented are typical values and should not be used for specification purposes.

Contact your Saint-Gobain Composite Solutions representative for more information.

Special requirements (e.g. thickness or color) are available. All values, except surface tension, are measured on non-etched film/laminate with a thickness of > 0.1 perpendicular to molding direction.

\*Raw material manufacturer data

\*\*Ball on Disc, Ø=6mm, v=10mm/s, F<sub>N</sub>=2N, t=2h

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