



UHMW Film

Skived UHMW film/UHMW-PE Film/UPE Film

UHMW Film (ultra-high molecular weight polyethylene) is designed for general applications requiring release, non-stick properties, or enhanced robustness. These films offer superior abrasion resistance and durability under mechanical stress, along with self-lubricating characteristics similar to Skived PTFE Films. Their anti-stick surface and sound-deadening properties make them ideal for demanding applications.

Additionally, Skived UHMW-PE Films can be bonded without etching, using methods such as thermal activation or bonding agents. UHMW exhibits exceptional abrasion resistance, often surpassing that of steel. With broad chemical resistance and a low coefficient of friction, UHMW serves as a versatile engineering material suitable for severe duty applications.

Characterized by its slipperiness akin to PTFE, UHMW polymers possess a molecular weight average ten times greater than that of conventional high-density polyethylene resins, enhancing their performance in various applications.

Advantages

- **High Abrasion Resistance and Durability**

Exceptional resistance to wear and tear, ensuring long-lasting performance.

- **Continuous Service Temperature**

Capable of withstanding temperatures up to 90°C.

- **Self-Lubricating Properties**

Similar to PTFE, providing reduced friction in applications.

- **Anti-Stick Surface**

Designed to minimize adhesion, making it ideal for release applications.

- **Sound Deadening**

Effective in reducing noise, enhancing user experience.

- **Bondable Without Etching**

Can be easily bonded using thermal activation or bonding agents.

Specification

Our UHMW-PE films can be produced in widths up to 2000 mm and thicknesses from 25µm to 1,500µm. Additionally, we can accommodate special thicknesses, widths, or other specifications upon request.

Color: White or Semi-conductive Black

Application

Hoses & Pipe Systems

- Chemical, fuel, and hydraulic hoses
- Abrasion-resistant hose coverings

Provide chemical resistance, pressure durability, and protection of identification markings, extending service life.

Conveying & Wear Protection

- Chute linings
- Rubber belting surfaces

Reduce friction and wear, improve efficiency, and increase durability of conveying systems.

Storage Tanks & Sealing

- Tank liners
- Elastomer laminates

Offer gas- and liquid-tight barriers, suitable for ambient and cryogenic conditions, enhancing sealing and durability.

Industrial & Machinery

- Release materials
- Low-friction & anti-squeak components

Withstand high wear environments, reduce friction and noise, and improve operational efficiency in automotive and industrial machinery.

UHMW Film properties

		UHMW Film
General Properties	Test Method	
Specific Gravity	ASTM D792	0.96
Standard width mm(in)		Maximum 2,000(78.7)
Thickness Available mm(mil)		0.025 to 1.5 (1 to 60)
Color		White or Semi-conductive Black
Mechanical Properties		
Surface finish	DIN EN ISO 4288	$R_t \leq 10 \mu\text{m}$
Coefficient of friction		0.1
Tensile Strength MPa(psi)	ASTM D882	$\geq 30(4350)$
Elongation %	ASTM D882	≥ 180
Thermal Properties		
Continuous use temperature °C(°F)	UL-746B	-200 ~ +80 (-328 ~ 176)
Melt Point °C(°F)	ASTM D3418	130(266)
Surface Treatments Available		
Adhesive Bondable		Yes



☎ +86(0)523 80721510 📱 +86 13901437262

✉ sales@esone.com 🌐 www.ptfe-fabrics.com

📍 JIANGSU ESONE NEW MATERIAL CO.,LTD
8th Hengfeng Road Agricultural Products Processing Zone, Taixing, Jiangsu, China 225400

📍 TAIXING YOUNGSUN FL-PLASTICS CO.,LTD
West End of South Third Ring Road, Taixing, Jiangsu, China 225400