

FEATURES

- Exhibit outstanding toughness, flexibility, and abrasion resistance
- Available in a range of surface embossments
- Offered in a clear/natural color with custom color matching options available
- Hardness or softness remains relatively constant over wide temperature ranges for extended periods of time

BENEFITS

- Can be formulated for low surface tack, improved light stability, and antimicrobial properties
- Create further functionality by laminating TPU and TPU blend films with other films, non-woven fabrics, and/or knit fabrics
- Ability to tailor performance by blending other polymers

For more information, visit www.wimancorp.com/thermoplastic-films/thermoplastic-polyurethane-blends



TPU films from Wiman Corporation exhibit excellent toughness and are pin-hole free, making them ideal for water circulation devices and other medical applications. TPU is particularly suited for hot and cold therapy devices because of its ability to maintain performance over a wide range of temperatures.

Thermoplastic Polyurethane (TPU) film from Wiman Corporation is ideal for a wide variety of applications. Compared to other polymers, TPU-based films exhibit outstanding toughness, flexibility, and abrasion resistance. In addition, these polymers are extremely versatile and can be formulated for low surface tack, improved light stability, and antimicrobial properties.

We offer a variety of films derived from three different TPU chemistries, all of which are easily formed and fabricated by conventional methods and are receptive to Radio Frequency (RF) welding. Our ether-based grades resist mold and hydrolysis when exposed to water and high humidity environments, while our ester-based grades are generally preferred for applications where the film will be in contact with oils or fuels. For outdoor applications requiring a clear, non-yellowing product, our aliphatic TPUs are preferred.

All of these grades are available in a range of sizes and surface embossments. Traditionally, TPU films are a natural/clear color; however, custom color matching and other tailored performance attributes are available upon request. Plasticizers are typically not required as TPU is inherently soft. It is also notable that the softness or hardness of these polymers remains relatively consistent over a wide temperature range for extended periods of time.

Common TPU Film Sizes & Capabilities:

- Thicknesses of 8 – 60 mils are available in widths up to 60"
- Thicknesses of 60 – 125 mils are available in widths up to 48"

For further functionality, we have the ability to laminate TPU and TPU blend films with other films (dual durometer), non-woven fabrics, and/or knit fabrics.

As a custom manufacturer of extruded film, Wiman Corporation works with customers and suppliers to ensure that their specific requirements are met. For data on our most commonly extruded TPU products, please see the page 2 or visit www.wimancorp.com.



Wiman Corporation is a wholly owned subsidiary of RTP Company.

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THERMOPLASTIC POLYURETHANE (TPU) FILMS

COMMONLY EXTRUDED TPU PRODUCTS

Property	Test Method	Unit	Ether-based Grades					Ester-based Grades		Aliphatic Grade
			ET-90070	ET-90083	ET-50087	ET-90090	ET-90092	ES-20085	ES-20092	AT-90090
Specific Gravity	ASTM D 792	--	1.07	1.11	1.12	1.13	1.14	1.20	1.22	1.08
Durometer (5 second dwell)	ASTM D 2240	--	72	84	87	90	92	83	93	90
Tensile Strength	ASTM D 882	psi	5000	5700	6300	7700	8700	7300	8200	7500
Elongation @ Break	ASTM D 882	%	850	720	630	680	650	700	480	550
Stress @ 100% Elongation	ASTM D 882	psi	485	850	1100	1100	1400	900	1800	1500
Stress @ 300% Elongation	ASTM D 882	psi	700	1300	2100	2300	3400	2000	5000	3500
Tear Strength	ASTM D 624	lbf/in	350	450	510	500	500	550	700	480
Taber Abrasion (H18, 1000 g, 1000 cycles)	ASTM D 3489	mg Loss	7	30	40	25	55	35	27	--
Glass Transition Temperature	Internal	°F	-68	-49	-49	-47	-40	-44	5	-40

This information is intended to be used only as a guideline. Data are obtained from specimens extruded under carefully controlled conditions from representative samples of the materials described herein. Properties may be materially affected by the size and shape of the item as well as environmental conditions. No assurance can be implied that all articles will have the same properties as those listed.



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