



SONGSTOMER™
for the film and
sheet industry

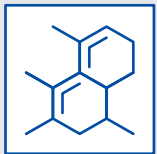
SONGWON is a leading specialist in products and technologies for the film and sheet industry.

It's all about **the chemistry**®

www.songwon.com

SONGWON – Long-standing expertise in the development of TPU resins for the film and sheet industry.

Wide range of TPU polymers



Suitable for highly demanding applications

Cutting-edge quality and EHS standards

Comprehensive technical expertise



Dedicated TPU testing laboratory in South Korea

Ability to develop and supply customized TPU solutions

Proven reliability



More than 35 years' manufacturing experience in South Korea

Backward integration into the production of polyester polyols

Global sales organization and distribution channels in Asia, Europe and North America

Strong commitment



Significant investments to increase TPU production capacity

Continuous innovation to meet new industry standards

SONGSTOMER™ TPU polymers are suitable for the manufacture of high-quality films and sheets and generate significant value for film and sheet manufacturers...

... Their excellent and consistent flow characteristics confer good processing and color stability and allow the production of highly transparent products, enhancing the look and feel of end products and minimizing waste.

... Their high resistance to tearing, cutting, puncturing, weathering, abrasion, oil and solvent, together with their general robustness, helps to prolong the life of the end product.

... Their stability at low temperatures boosts productivity because films and sheets retain their flexibility and do not become brittle.

Outstanding properties



Excellent transparency in thin sections

Very low gel content

High abrasion resistance

Weather and oil/solvent resistance

Flexibility retention at low temperatures

Good anti-blocking properties

Processing stabilization

Demanding applications



Protective films for mobile phones

Foam-in-place seats

Waterproof camping bags, tents

Bed sheets

Inflatable sporting goods

SONGSTOMER™ TPU polymers recommended for film and sheet applications

Properties		Test Method	Units	P-7185A	P-8185AI	P-8185AC	HM-4000	P-3285A
Characteristics				Polyester T-die extrusion	Polyester Blown film extrusion	Polyester Calendaring	Polyester Hotmelt adhesive T-die extrusion	Polyether T-die extrusion
Hardness	ASTM D2240	Shore A		87 ± 2	88 ± 2	87 ± 2	83 ± 2	86 ± 2
Specific Gravity	ASTM D792	g/cm ³		1.20	1.21	1.20	1.16	1.12
Tensile Strength	ASTM D412	kgf/cm ²		420	450	400	250	300
		MPa		41	44	39	24.5	29.5
Tensile Stress at 100% Modulus	ASTM D412	kgf/cm ²		70	65	60	45	60
		MPa		7	6.5	6	4.5	6
Tensile Stress at 300% Modulus	ASTM D412	kgf/cm ²		130	120	90	70	110
		MPa		13	12	9	7	11
Ultimate Elongation	ASTM D412	%		400	400	450	600	450
Tear Strength	ASTM D624	kgf/cm		100	100	90	80	95
		N/mm		98	98	88	78	93

The above are typical values and should not be used as specifications.

Extrusion Conditions	Zone 1	°C	190	185	185	175	190
	Zone 2		195	190	190	185	195
	Zone 3		200	195	195	190	200
	Adapter		205	200	200	190	205
	Die		200	195	195	185	200

Extruder parameters: L/D: 26-30, compression ratio: 2.5 – 3.5

Drying conditions



SONGSTOMER™ TPU products must be dried before processing.

Recommended drying conditions: 70-80°C for 3-4 hours in dehumidifying dryer.

The moisture content should not exceed 0.05%.

Avoid unnecessarily prolonged drying periods to prevent any TPU discoloration.

Storage conditions



SONGSTOMER™ TPU products are supplied in pellet form.

The materials are packed in 25kg aluminum-polyethylene bags.

The materials must be stored in a cool and dark place.

Once open, reseal the bags to protect the contents.



For further information, please contact:

tpuspu@songwon.com

SONGWON provides customers with warranties and representations as to the chemical or technical specifications, compositions and/or the suitability for use for any particular purpose exclusively in individual written agreements.

The facts and figures contained herein have been carefully compiled to the best of SONGWON's knowledge but are essentially intended for informational purposes only.

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Version 3, October 2025



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