



SONGSTOMER™  
TPU innovative  
solutions for the film  
and sheet industry

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

Our broad portfolio of SONGSTOMER™ polyether- and polyester-based engineering materials enables us to design customized solutions for numerous film and sheet applications.

Thanks to their excellent physical and technical attributes, SONGSTOMER™ TPU polymers are widely used by film and sheet manufacturers. The products combine a variety of properties that help to prolong the life and enhance the look and feel of high-value end products.

It's all about **the chemistry™**

 **SONGWON**

# 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

## 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

## Comprehensive technical expertise



Dedicated TPU testing laboratory in South Korea  
Ability to develop and supply customized TPU solutions

## 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 Calendering	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 <sup>3</sup>	1.20	1.21	1.20	1.16	1.12
Tensile Strength	ASTM D412	kgf/cm <sup>2</sup>	420	450	400	250	300
		MPa	41	44	39	24.5	29.5
Tensile Stress at 100% Modulus	ASTM D412	kgf/cm <sup>2</sup>	70	65	60	45	60
		MPa	7	6.5	6	4.5	6
Tensile Stress at 300% Modulus	ASTM D412	kgf/cm <sup>2</sup>	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	°C	P-7185A	P-8185AI	P-8185AC	HM-4000	P-3285A
			Zone 1	190	185	185	175
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 a 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 25 kg 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 go to:

**[www.songwon.com](http://www.songwon.com)**

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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.

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