



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 – 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/cm³ | | | 1.20 | 1.21 | 1.20 | 1.16 | 1.12 |
| Tensile Strength | ASTM D412 | kgf/cm² | | | 420 | 450 | 400 | 250 | 300 |
| | | MPa | | | 41 | 44 | 39 | 24.5 | 29.5 |
| Tensile Stress at 100 % Modulus | ASTM D412 | kgf/cm² | | | 70 | 65 | 60 | 45 | 60 |
| | | MPa | | | 7 | 6.5 | 6 | 4.5 | 6 |
| Tensile Stress at 300 % Modulus | ASTM D412 | kgf/cm² | | | 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 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.





Check out our
official website

For further information, please go to:

www.songwon.com

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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