SONGWON is a leading specialist in products and technologies for the wire and cable industry. Our broad portfolio of SONGSTOMER™ polyether-based engineering materials enables us to design customized solutions for numerous wire and cable applications.

Thanks to their excellent physical and technical attributes, SONGSTOMER™ TPU polymers are widely used by wire and cable manufacturers to produce high-quality cable jackets. SONGSTOMER™ TPU grades combine a variety of properties that help to extend the service life of valuable cable systems.

SONGSTOMER™
TPU innovative solutions for the wire and cable industry

It’s all about the chemistry™
SONGWON – Long lasting expertise for the wire and cable industry

SONGSTOMER™ TPU polymers are suitable for the manufacture of robust and reliable cable jackets and generate significant value for cable manufacturers...

... Their excellent flow characteristics allow the design of complex shapes and the production of dimensionally stable components, thus minimizing waste.

... Their outstanding resistance at low temperatures helps to maintain high productivity because jackets do not become brittle and retain their flexibility.

... Their high resistance to abrasion, oil and weathering helps to prolong the life of the end product and reduce maintenance requirements.

Outstanding properties

- High tensile strength
- Wear resistance
- Toughness
- Good resistance to low temperatures
- Weather and oil resistance
- Excellent resistance to hydrolysis

Demanding applications

- Power/sensor cables for industrial robots
- Robotic arm cables
- Control cables for windmills and turbines
- Solar panel cables
- Power cables for mining and off-shore applications
- Cables for transportation systems

Wide range of TPU polymers

Suitable for flame-retardant, transparent and highly heat-resistant 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

Proven reliability

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SONGSTOMER™ TPU polymers recommended for cable applications

### 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.

### 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.

### Properties Test Method Units

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Test Method</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardness</td>
<td>ASTM D2240</td>
<td>Shore</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>ASTM D792</td>
<td>g/cm³</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>ASTM D412</td>
<td>kgf/cm²/MPa</td>
</tr>
<tr>
<td>Tensile Stress at 100% Modulus</td>
<td>ASTM D412</td>
<td>kgf/cm²/MPa</td>
</tr>
<tr>
<td>Tensile Stress at 300% Modulus</td>
<td>ASTM D412</td>
<td>kgf/cm²/MPa</td>
</tr>
<tr>
<td>Ultimate Elongation</td>
<td>ASTM D412</td>
<td>%</td>
</tr>
<tr>
<td>Tear Strength</td>
<td>ASTM D604</td>
<td>kgf/cm/N/mm</td>
</tr>
</tbody>
</table>

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

### Extrusion Conditions

| Zone 1 | 185 | 190 | 195 | 195 | 205 |
| Zone 2 | 190 | 195 | 200 | 200 | 210 |
| Zone 3 | 195 | 200 | 205 | 205 | 215 |
| Adapter| 200 | 205 | 210 | 210 | 220 |
| Die    | 195 | 200 | 205 | 205 | 215 |

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

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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.

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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