

Sarlink® TPV 6180N

Teknor Apex Company - Thermoplastic Vulcanizate

Saturday, September 14, 2024

General Information

Product Description

Sarlink® TPV 6100 series are engineered materials designed for consumer, automotive, and industrial applications requiring superior colorability and elastic performance. Sarlink® TPV 6180N is a medium hardness, low density, multi-purpose thermoplastic vulcanizate that does not require pre-drying and can be processed by injection molding.

General

| | | | |
|-------------------|--|---|---|
| Material Status | • Commercial: Active | | |
| Availability | • Africa & Middle East • Asia Pacific | • Europe • Latin America | • North America |
| Features | • Chemical Resistant • Good Adhesion • Good Colorability • Good Flexibility | • Good Flow • Good Processability • Low Density • Low Specific Gravity | • Medium Hardness • Resilient |
| Uses | • Automotive Applications • Automotive Interior Parts | • Consumer Applications • Industrial Applications | • Rubber Replacement • Soft Touch Applications |
| RoHS Compliance | • RoHS Compliant | | |
| Appearance | • Natural Color | • Opaque | |
| Forms | • Pellets | | |
| Processing Method | • Extrusion | • Injection Molding | |

ASTM & ISO Properties ¹

| Physical | Nominal Value | Unit | Test Method |
|-----------------------------|---------------|-------------------|-------------|
| Density | 0.937 | g/cm ³ | ISO 1183 |
| Elastomers | Nominal Value | Unit | Test Method |
| Tensile Stress | | | ASTM D412 |
| Across Flow : 100% Strain | 4.20 | MPa | |
| Flow : 100% Strain | 6.00 | MPa | |
| Tensile Stress | | | ISO 37 |
| Across Flow : 100% Strain | 4.20 | MPa | |
| Flow : 100% Strain | 6.00 | MPa | |
| Tensile Strength | | | ASTM D412 |
| Across Flow : Break | 8.00 | MPa | |
| Flow : Break | 7.30 | MPa | |
| Tensile Stress | | | ISO 37 |
| Across Flow : Break | 8.00 | MPa | |
| Flow : Break | 7.30 | MPa | |
| Tensile Elongation | | | ASTM D412 |
| Across Flow : Break | 650 | % | |
| Flow : Break | 390 | % | |
| Tensile Elongation | | | ISO 37 |
| Across Flow : Break | 650 | % | |
| Flow : Break | 390 | % | |
| Tear Strength - Across Flow | 45.6 | kN/m | ASTM D624 |
| Tear Strength ² | 45.6 | kN/m | ISO 34-1 |

Revision Date: 9/29/2023

The information and recommendations contained in this bulletin are, to the best of our knowledge, accurate and reliable but no guarantee of their accuracy is made. All products are sold upon condition that purchasers shall make their own tests to determine the suitability of such products for their particular purposes and uses and purchasers assume all risks and liability for the results of use of the products, including use in accordance with seller's recommendations. Nothing in this bulletin constitutes permission or a recommendation to practice or use any invention covered by any patent owned by this company or by others. There is no warranty of merchantability and there are no other warranties for the products described.

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| Elastomers | Nominal Value | Unit | Test Method |
|--|----------------------|-------------|--------------------|
| Compression Set | | | ASTM D395 |
| 23°C, 22 hr | 39 | % | |
| 70°C, 22 hr | 54 | % | |
| 125°C, 70 hr | 81 | % | |
| Compression Set | | | ISO 815 |
| 23°C, 22 hr | 39 | % | |
| 70°C, 22 hr | 54 | % | |
| 125°C, 70 hr | 81 | % | |
| Hardness | Nominal Value | Unit | Test Method |
| Durometer Hardness | | | ASTM D2240 |
| Shore A, Extruded | 85 | | |
| Shore A, 5 sec, Extruded | 80 | | |
| Shore A, Injection Molded | 88 | | |
| Shore A, 5 sec, Injection Molded | 84 | | |
| Shore Hardness | | | ISO 868 |
| Shore A, Extruded | 85 | | |
| Shore A, 5 sec, Extruded | 80 | | |
| Shore A, Injection Molded | 88 | | |
| Shore A, 5 sec, Injection Molded | 84 | | |
| Additional Information | Nominal Value | Unit | Test Method |
| Apparent Shear Viscosity - Capillary @ 206/s | | | |
| 200°C | 212 | Pa·s | ASTM D3835 |
| 200°C | 212 | Pa·s | ISO 11443 |

Legal Statement

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Processing Information

| Injection | Nominal Value | Unit |
|------------------------|----------------------|-------------|
| Drying Temperature | 82 | °C |
| Drying Time | 3.0 | hr |
| Rear Temperature | 177 to 216 | °C |
| Middle Temperature | 177 to 216 | °C |
| Front Temperature | 177 to 216 | °C |
| Nozzle Temperature | 188 to 221 | °C |
| Processing (Melt) Temp | 182 to 221 | °C |
| Mold Temperature | 10 to 66 | °C |
| Back Pressure | 0.0689 to 1.03 | MPa |
| Screw Speed | 100 to 200 | rpm |
| Screw L/D Ratio | 20.0:1.0 | |

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| Extrusion | Nominal Value | Unit |
|-----------------------|---------------|------|
| Drying Temperature | 82 | °C |
| Drying Time | 3.0 | hr |
| Cylinder Zone 1 Temp. | 182 to 204 | °C |
| Cylinder Zone 2 Temp. | 182 to 204 | °C |
| Cylinder Zone 3 Temp. | 188 to 210 | °C |
| Cylinder Zone 4 Temp. | 188 to 210 | °C |
| Melt Temperature | 193 to 216 | °C |
| Die Temperature | 193 to 216 | °C |
| Take-Off Roll | 21 to 49 | °C |

Notes

¹ Typical properties: these are not to be construed as specifications.

² Method Ba, Angle (Unnicked)

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