

# Sarlink® TPV 3150

Thermoplastic Vulcanizate

Teknor Apex Company

## Message:

A low hardness, multi-purpose thermoplastic elastomer featuring excellent compression set and high temperature performance. Sarlink® 3150 can be processed by injection molding or extrusion for applications such as grips, seals, gaskets, profiles and other articles.

| General Information |                         |
|---------------------|-------------------------|
| UL YellowCard       | E54709-101009569        |
| Features            | Heat resistance, medium |
|                     | Hardness, low           |
| Uses                | Washer                  |
|                     | Diaphragm               |
|                     | Seals                   |
|                     | Profile                 |
| Appearance          | Opacity                 |
| Forms               | Particle                |
| Processing Method   | Extrusion               |
|                     | Injection molding       |

| Physical                              | Nominal Value | Unit              | Test Method         |
|---------------------------------------|---------------|-------------------|---------------------|
| Specific Gravity                      |               |                   |                     |
| --                                    | 0.948         | g/cm <sup>3</sup> | ASTM D792           |
| --                                    | 0.950         | g/cm <sup>3</sup> | ISO 1183            |
| Hardness                              | Nominal Value | Unit              | Test Method         |
| Durometer Hardness                    |               |                   | ASTM D2240, ISO 868 |
| Shaw A, 5 seconds, extruded           | 54            |                   | ASTM D2240, ISO 868 |
| Shore A, 5 seconds, injection molding | 56            |                   | ASTM D2240, ISO 868 |
| Elastomers                            | Nominal Value | Unit              | Test Method         |
| Tensile Stress                        |               |                   | ASTM D412, ISO 37   |
| Transverse flow: 100% strain          | 1.90          | MPa               | ASTM D412, ISO 37   |
| Flow: 100% strain                     | 3.00          | MPa               | ASTM D412, ISO 37   |
| Tensile Strength                      |               |                   | ASTM D412, ISO 37   |
| Transverse flow: Fracture             | 5.10          | MPa               | ASTM D412, ISO 37   |
| Flow: Fracture                        | 4.10          | MPa               | ASTM D412, ISO 37   |
| Tensile Elongation                    |               |                   | ASTM D412, ISO 37   |
| Transverse flow: Fracture             | 600           | %                 | ASTM D412, ISO 37   |
| Flow: Fracture                        | 240           | %                 | ASTM D412, ISO 37   |

|                                                    |               |        |                    |
|----------------------------------------------------|---------------|--------|--------------------|
| Tear Strength - Across Flow                        |               |        |                    |
| --                                                 | 24.5          | kN/m   | ASTM D624          |
| -- 1                                               | 24            | kN/m   | ISO 34-1           |
| Compression Set                                    |               |        | ASTM D395, ISO 815 |
| 23°C, 22 hr                                        | 20            | %      | ASTM D395, ISO 815 |
| 70°C, 22 hr                                        | 32            | %      | ASTM D395, ISO 815 |
| 125°C, 70 hr                                       | 52            | %      | ASTM D395, ISO 815 |
| Aging                                              | Nominal Value | Unit   | Test Method        |
| Change in Tensile Strength in Air - Across Flow    |               |        |                    |
| 135°C, 1000 hr                                     | -6.0          | %      | ASTM D573, ISO 188 |
| 100% strain, 135°C, 1000 hr                        | 7.0           | %      | ASTM D573          |
| 150°C, 168 hr                                      | 7.0           | %      | ASTM D573, ISO 188 |
| 100% strain, 150°C, 168 hr                         | 5.0           | %      | ASTM D573          |
| 100% strain 135°C, 1000 hr                         | 7.0           | %      | ISO 188            |
| 100% strain 150°C, 168 hr                          | 5.0           | %      | ISO 188            |
| Change in Ultimate Elongation in Air - Across Flow |               |        | ASTM D573, ISO 188 |
| 135°C, 1000 hr                                     | -7.0          | %      | ASTM D573, ISO 188 |
| 150°C, 168 hr                                      | 8.0           | %      | ASTM D573, ISO 188 |
| Change in Durometer Hardness in Air                |               |        | ASTM D573, ISO 188 |
| Support a, 135°C, 1000 hr                          | 1.0           |        | ASTM D573, ISO 188 |
| Support a, 150°C, 168 hr                           | 2.0           |        | ASTM D573, ISO 188 |
| Change in Volume                                   |               |        |                    |
| 125°C, 70 hr, in IRM 903 oil                       | 130           | %      | ASTM D471          |
| 125°C, 70 hr, in IRM 903 oil                       | 130           | %      | ISO 1817           |
| Thermal                                            | Nominal Value | Unit   | Test Method        |
| RTI Elec                                           | 50.0          | °C     | UL 746             |
| RTI Imp                                            | 50.0          | °C     | UL 746             |
| RTI                                                | 50.0          | °C     | UL 746             |
| Flammability                                       | Nominal Value |        | Test Method        |
| Flame Rating (1.50 mm, Natural and Black Colors)   | HB            |        | UL 94              |
| Additional Information                             | Nominal Value | Unit   | Test Method        |
| Apparent Shear Viscosity - Capillary, @ 206/s      |               |        |                    |
| 200°C                                              | 270           | Pa · s | ISO 11443          |
| 200°C                                              | 270           | Pa · s | ASTM D3835         |
| Injection                                          | Nominal Value | Unit   |                    |
| Rear Temperature                                   | 180 - 215     | °C     |                    |
| Middle Temperature                                 | 180 - 215     | °C     |                    |
| Front Temperature                                  | 180 - 215     | °C     |                    |
| Nozzle Temperature                                 | 187 - 220     | °C     |                    |

|                                                                        |               |      |
|------------------------------------------------------------------------|---------------|------|
| Processing (Melt) Temp                                                 | 185 - 220     | °C   |
| Mold Temperature                                                       | 10.0 - 55.0   | °C   |
| Back Pressure                                                          | 0.100 - 1.00  | MPa  |
| Screw Speed                                                            | 100 - 200     | rpm  |
| Extrusion                                                              | Nominal Value | Unit |
| Cylinder Zone 1 Temp.                                                  | 180 - 200     | °C   |
| Cylinder Zone 2 Temp.                                                  | 180 - 205     | °C   |
| Cylinder Zone 3 Temp.                                                  | 187 - 210     | °C   |
| Cylinder Zone 4 Temp.                                                  | 187 - 210     | °C   |
| Melt Temperature                                                       | 195 - 215     | °C   |
| Die Temperature                                                        | 195 - 215     | °C   |
| Take-Off Roll                                                          | 20.0 - 50.0   | °C   |
| Extrusion instructions                                                 |               |      |
| Screen Pack: 20 to 60 meshScrew: general purposeCompression Ratio: 3:1 |               |      |
| NOTE                                                                   |               |      |

- Method B, right-angle specimen  
(without cut)

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