

PRODUCT DESCRIPTION

A soft , black thermoplastic vulcanizate, TPV (EPDM/PP) in the thermoplastic elastomer family designed for use in medical applications

GENERAL PROPERTIES

| | |
|--------------------------|---|
| Material Status | Active |
| Availability | Europe North America Asia- Pasific Africa & Middle East |
| Features | Ozone Resistance Adhesion to Polyolefins Recyclable Compliant with RoHS Directive 2011/65/EU Compliant with USP Class VI Requirements |
| Certification | RoHS |
| Appearance | Black |
| Form | Pellets |
| Processing Method | Injection, Extrusion |

Physical Properties

| Property | Typical Value (English) | Typical Value (SI) | Test Method |
|--|-------------------------|------------------------|------------------------------|
| Density | 0.91 g/cm ³ | 0,91 g/cm ³ | ASTM D 792 |
| Durometer Hardness, 3 sec (Shore A) | 70.00 | 70,00 | ASTM D 2240 |
| Tensile Strength at Break | 798 Psi | 5,50 MPa | ASTM D412, Method A |
| Mod.of Elasticity %100 | 406 Psi | 2,80 MPa | ASTM D412, Method A |
| Mod.of Elasticity %300 | 682 Psi | 4,70 MPa | ASTM D412, Method A |
| Elongation at break | 450.00 % | 450,00 % | ASTM D412, Method A |
| Compression Set (at 73 °F, 22 h) | 19.00 % | 19,00 % | ASTM D 395, Type 2, Method B |
| Compression Set (at 158 °F, 22 h) | 35.00 % | 35,00 % | ASTM D 395, Type 2, Method B |
| Compression Set (at 212 °F, 22 h) | 46.00 % | 46,00 % | ASTM D 395, Type 2, Method B |
| Tear Resistance | 194.14 lbf/in | 34,00 N/mm | ASTM D624 |

Shrinkage

| Property | Typical Value (English) | Typical Value (SI) | Test Method |
|--------------------|-------------------------|--------------------|-------------|
| Flow | 2.00% | 2.00% | ASTM D955 |
| Across Flow | 1.25% | 1.25% | ASTM D955 |

Ageing Tests

| Additional Information | Typical Value (English) | Typical Value (SI) | Test Method |
|---------------------------|-------------------------|--------------------|-------------|
| Ozone Resistance-Stressed | No cracks | No cracks | ASTM D 1149 |

Bondable to

PE-PP-EVA

Additional Information

Elastron products are not compatible with PVC and Acetal.
Regrinding level up to %20 is recommended with minimum property loss.

Processing

| Injection Molding | Typical Value (English) | | Typical Value (SI) | |
|-----------------------|-------------------------|-------|--------------------|-------|
| Drying temperatures | 194 | °F | 90 | °C |
| Drying time | 2 | hours | 2 | hours |
| Rear Zone temp. | 311-347 | °F | 155- 175 | °C |
| Middle Zone temp. | 329-365 | °F | 165- 185 | °C |
| Front Zone temp. | 338-374 | °F | 170- 190 | °C |
| Nozzle Temperature | 356-410 | °F | 180- 210 | °C |
| Injection Speed | Moderate | - | Moderate | - |
| Injection Time | 2- 4 | sec. | 2- 4 | sec. |
| Injection Pressure | 10- 40 | bar | 10- 40 | bar |
| Hold Pressure | 5- 20 | bar | 5- 20 | bar |
| Back Pressure | 5- 40 | bar | 5- 40 | bar |
| Screw Speed | 50- 200 | rpm | 50- 200 | rpm |
| Mold Temperature | 77-122 | °F | 25- 50 | °C |
| Screw Comp. ratio | 1.5:1- 2.0:1 | - | 1.5:1- 2.0:1 | - |
| Screw L/D ratio | 18- 24 | - | 18- 24 | - |
| Residence time | 1-2 shot | - | 1-2 shot | - |
| Cushion size | 0.3120 | inc | 8 | mm |
| Suggested Max Regrind | 20 | % | 20 | % |

| Extrusion Molding | Typical Value (English) | | Typical Value (SI) | |
|-----------------------|-------------------------|-------|--------------------|-------|
| Drying temperatures | 194 | °F | 90 | °C |
| Drying time | 2 | hours | 2 | hours |
| Screw Comp. Ratio | 1.5:1- 2.0:1 | - | 1.5:1- 2.0:1 | - |
| Screw L/D | 18- 30 | - | 18- 30 | - |
| Feed Zone temp. | 311-329 | °F | 155- 165 | °C |
| Rear Zone temp. | 320-356 | °F | 160- 180 | °C |
| Center Zone temp. | 329-365 | °F | 165- 185 | °C |
| Front Zone temp. | 338-374 | °F | 170- 190 | °C |
| Head temp. | 356-410 | °F | 180- 210 | °C |
| Die temp. | 365-419 | °F | 185- 215 | °C |
| Suggested Max Regrind | 20 | % | 20 | % |

Notes

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ISO 9001: 2015 & IATF16949: 2016 & ISO 14001: 2015 REGISTERED QUALITY SYSTEMS

