

Medalist® MD-417A

Teknor Apex Company - Thermoplastic Elastomer

Wednesday, February 16, 2011

General Information

| General | | | |
|-------------------|---|--|--------------------|
| Generic Name | • Thermoplastic Elastomer (TPE) | | |
| Material Status | • Experimental: Active | | |
| Availability | • Africa & Middle East • Asia Pacific • Central America | • Europe • Latin America • North America | • South America |
| Uses | • Medical/Healthcare Applications | • Pharmaceuticals | • Safety Equipment |
| Appearance | • Translucent | | |
| Forms | • Pellets | | |
| Processing Method | • Extrusion | • Injection Molding | |

ASTM & ISO Properties ¹

| Physical | Nominal Value | Unit | Test Method |
|--|---------------|----------|-------------|
| Specific Gravity | 0.890 | | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (200°C/5.0 kg) | 5.0 | g/10 min | ASTM D1238 |
| Elastomers | Nominal Value | Unit | Test Method |
| Tensile Stress - Flow (300% Strain) | 400 | psi | ASTM D412 |
| Tensile Strength - Flow (Break) | 1200 | psi | ASTM D412 |
| Tensile Elongation - Flow (Break) | 750 | % | ASTM D412 |
| Tear Strength | 174 | lbf/in | ASTM D624 |
| Compression Set (73°F, 22.0 hr) | 21 | % | ASTM D395 |
| Hardness | Nominal Value | Unit | Test Method |
| Durometer Hardness | | | ASTM D2240 |
| Shore A, 1 sec | 60 | | |
| Shore A, 10 sec | 58 | | |

Processing Information

| Injection | Nominal Value | Unit |
|------------------------|---------------|------|
| Rear Temperature | 260 to 300 | °F |
| Middle Temperature | 280 to 320 | °F |
| Front Temperature | 300 to 340 | °F |
| Nozzle Temperature | 340 to 380 | °F |
| Processing (Melt) Temp | 340 to 380 | °F |
| Mold Temperature | 70.0 to 100 | °F |
| Injection Pressure | 200 to 800 | psi |
| Back Pressure | 25.0 to 100 | psi |
| Screw Speed | 50 to 100 | rpm |
| Cushion | 0.150 to 1.00 | in |

Injection Notes

Drying is not necessary. However, if moisture is a problem, dry the pellets for 2 to 4 hours at 150°F (65°C).

| Extrusion | Nominal Value | Unit |
|-----------------------|---------------|------|
| Cylinder Zone 1 Temp. | 280 to 300 | °F |
| Cylinder Zone 2 Temp. | 300 to 320 | °F |

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The information presented on this data sheet was acquired by IDES from the producer of the material. IDES makes substantial efforts to assure the accuracy of this data. However, IDES assumes no responsibility for the data values and strongly encourages that upon final material selection, data points are validated with the material supplier.

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| Extrusion | Nominal Value | Unit |
|-----------------------|---------------|------|
| Cylinder Zone 3 Temp. | 320 to 360 | °F |
| Cylinder Zone 5 Temp. | 340 to 380 | °F |
| Die Temperature | 360 to 400 | °F |

Extrusion Notes

Screw Speed: 30 to 100 rpm

Notes

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