# Medalist® MD-12160H (PRELIMINARY DATA)

Thermoplastic Elastomer

Teknor Apex Company

## Message:

Medalist MD-12100H series are high performance thermoplastic elastomers designed for use in medical and healthcare applications requiring high flow. Medalist MD-12160H is a low density, medium hardness, resilient grade, available in NAT and colors, which can be sterilized and exhibits excellent adhesion to polypropylene.

| General Information | |
|---|---|
| Features | Low Specific Gravity |
| | Without Fillers |
| | Low density |
| | Pressure cooker disinfection |
| | smoothness |
| | Good disinfection |
| | Ethylene oxide disinfection |
| | Anti-gamma radiation |
| | Good formability |
| | Good flexibility |
| | Good coloring |
| | High liquidity |
| | Good chemical resistance |
| | Good toughness |
| | Halogen-free |
| | Elastic |
| | Medium hardness |
| Uses | Disposable Hospital Goods |
| | Handle |
| | Plug |
| | Bushing |
| | Washer |
| | Connector |
| | Seals |
| | Airbag |
| | Soft handle |
| | Rubber substitution |
| | Knob |
| | Drug |
| | Medical/nursing supplies |

| | |
|---|---|
| Agency Ratings | ISO 10993 Part 5<br>ISO 13485 |
| RoHS Compliance | RoHS compliance |
| Appearance | Translucent<br>Available colors<br>Natural color |
| Forms | Particle |
| Processing Method | Injection molding |

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Specific Gravity | 0.887 | g/cm³ | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) | 14 | g/10 min | ASTM D1238 |

| Hardness | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Durometer Hardness | | | ASTM D2240 |
| Shore A, 1 second, injection molding | 62 | | ASTM D2240 |
| Shore A, 5 seconds, injection molding | 60 | | ASTM D2240 |

| Elastomers | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Tensile Stress [1] | | | ASTM D412 |
| 50% strain | 1.62 | MPa | ASTM D412 |
| 100% strain | 1.97 | MPa | ASTM D412 |
| 300% strain | 3.00 | MPa | ASTM D412 |
| Tensile Strength [2] (Break) | 5.24 | MPa | ASTM D412 |
| Tensile Elongation [3] (Break) | 630 | % | ASTM D412 |
| Tear Strength [4] | 23.5 | kN/m | ASTM D624 |
| Compression Set [5] | | | ASTM D395 |
| 23°C, 22 hr | 21 | % | ASTM D395 |
| 70°C, 22 hr | 78 | % | ASTM D395 |

Legal statement



| Injection | Nominal Value | Unit |
|---|---|---|
| Rear Temperature | 160 - 177 | °C |
| Middle Temperature | 182 - 204 | °C |
| Front Temperature | 193 - 216 | °C |
| Nozzle Temperature | 182 - 227 | °C |
| Processing (Melt) Temp | 182 - 227 | °C |
| Mold Temperature | 27 - 49 | °C |

| | | |
|---|---|---|
| Injection Rate | Moderate-Fast | |
| Back Pressure | 0.172 - 0.689 | MPa |
| Screw Speed | 50 - 100 | rpm |
| Cushion | 3.81 - 12.7 | mm |

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

| NOTE | |
|---|---|
| 1. | C mold, 510mm/min |
| 2. | C mold, 510mm/min |
| 3. | C mold, 510mm/min |
| 4. | C mold, 510mm/min |
| 5. | Type 1 |



## Recommended distributors for this material

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