

Medalist® MD-10233 (PRELIMINARY DATA)

Teknor Apex Company - Thermoplastic Elastomer

Saturday, September 14, 2024

General Information

Product Description

Medalist MD-10233 is a high performance thermoplastic elastomer specifically designed for healthcare and medical applications. Medalist MD-10233 is a low hardness, low density, halogen-free grade that can be sterilized and is suitable for cast films and extrusion.

General

| | | | |
|-------------------|--|---|---|
| Material Status | • Preliminary Data ¹ | | |
| Availability | • Africa & Middle East • Asia Pacific | • Europe • Latin America | • North America |
| Features | • Autoclave Sterilizable • Chemical Resistant • Ethylene Oxide Sterilizable • Excellent Printability • Good Adhesion • Good Colorability • Good Flexibility • Good Processability | • Good Stretchability • Good Toughness • Halogen Free • High Elasticity • Low Density • Low Flow • Low Hardness • Low Specific Gravity | • Outstanding Surface Finish • Puncture Resistant • Radiation Sterilizable • Resilient • Tack Free • Wear Resistant • Without Fillers |
| Uses | • Cast Film • Dental Applications • Film | • Hospital Goods • Medical Devices • Medical/Healthcare Applications | • Rubber Replacement • Sheet |
| Agency Ratings | • ISO 10993-5 | • ISO 13485 | |
| RoHS Compliance | • RoHS Compliant | | |
| Appearance | • Natural Color | • Translucent | |
| Forms | • Pellets | | |
| Processing Method | • Cast Film | • Extrusion | |

ASTM & ISO Properties ²

| Physical | Nominal Value | Unit | Test Method |
|---|---------------|-------------------|-------------|
| Density / Specific Gravity | 0.898 | g/cm ³ | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (200°C/5.0 kg) | 1.5 | g/10 min | ASTM D1238 |
| Elastomers | Nominal Value | Unit | Test Method |
| Tensile Stress ³ (100% Strain) | 0.827 | MPa | ASTM D412 |
| Tensile Stress ³ (300% Strain) | 2.41 | MPa | ASTM D412 |
| Tensile Strength ³ (Break) | 11.9 | MPa | ASTM D412 |
| Tensile Elongation ³ (Break) | 760 | % | ASTM D412 |
| Tear Strength ³ | 36.8 | kN/m | ASTM D624 |
| Compression Set ⁴ | | | ASTM D395 |
| 23°C, 22 hr | 12 | % | |
| 70°C, 22 hr | 91 | % | |
| Hardness | Nominal Value | Unit | Test Method |
| Durometer Hardness | | | ASTM D2240 |
| Shore A, 1 sec, Injection Molded | 35 | | |
| Shore A, 5 sec, Injection Molded | 33 | | |
| Thermal | Nominal Value | Unit | Test Method |
| Brittleness Temperature | < -60.0 | °C | ASTM D746 |

Revision Date: 11/26/2019

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Legal Statement

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Processing Information

| Extrusion | Nominal Value | Unit |
|-----------------------|---------------|------|
| Cylinder Zone 1 Temp. | 193 to 204 | °C |
| Cylinder Zone 2 Temp. | 199 to 210 | °C |
| Cylinder Zone 3 Temp. | 210 to 221 | °C |
| Cylinder Zone 4 Temp. | 210 to 227 | °C |
| Die Temperature | 210 to 227 | °C |

Extrusion Notes

Drying is not necessary. However, if moisture is a problem, dry the pellets for 2 to 4 hours at 150°F (65°C).
Screw Speed: 30 to 100 rpm; Screen pack: from 60/200/200/60 to 60/200/400/400/200/60 mesh size

Notes

¹ PER ELLIOTT REQUEST 011518

² Typical properties: these are not to be construed as specifications.

³ Die C, 510 mm/min

⁴ Type 1

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