

# Medalist® MD-34940

Teknor Apex Company - Thermoplastic Elastomer

Thursday, May 25, 2023

## General Information

### Product Description

Medalist MD-34940 is a high performance thermoplastic elastomer specifically designed for overmolding and multi-shot molding applications in the healthcare/medical segment. Medalist MD-34940 is a low hardness, low density, RoHS compliant sterilizable grade that bonds well to PC, ABS, PC/ABS, COPE, PET, PBT, PMMA, ASA, SAN, and POM.

### General

|                   |  |   |   |
|-------------------|--|---|---|
| Material Status   | • Commercial: Active   |   |   |
| Availability      | • Africa & Middle East<br>• Asia Pacific   | • Europe<br>• Latin America   | • North America   |
| Features          | • Abrasion Resistant<br>• Bondability<br>• Chemical Resistant<br>• Conformable<br>• Crack Resistant<br>• E-beam Sterilizable | • Good Colorability<br>• Good Flexibility<br>• Good Flow<br>• Good Impact Resistance<br>• Good Moldability<br>• Good Scratch Resistance | • Good Toughness<br>• Halogen Free<br>• Low Density<br>• Low Hardness |
| Uses              | • Bonding<br>• Gaskets   | • Medical/Healthcare Applications<br>• Overmolding  | • Soft Touch Applications   |
| Agency Ratings    | • ISO 10993-5  | • ISO 13485   |   |
| RoHS Compliance   | • RoHS Compliant   |   |   |
| Appearance        | • Colors Available   | • Natural Color   | • Opaque  |
| Forms             | • Pellets  |   |   |
| Processing Method | • Injection Molding  | • Multi Injection Molding   |   |

## ASTM & ISO Properties <sup>1</sup>

| Physical                                  | Nominal Value | Unit              | Test Method |
|---|---------------|-------------------|-------------|
| Density / Specific Gravity                | 0.940         | g/cm <sup>3</sup> | ASTM D792   |
| Melt Mass-Flow Rate (MFR) (230°C/2.16 kg) | 0.60          | g/10 min          | ASTM D1238  |
| Elastomers                                | Nominal Value | Unit              | Test Method |
| Tensile Stress <sup>2</sup> (50% Strain)  | 0.862         | MPa               | ASTM D412   |
| Tensile Stress <sup>2</sup> (100% Strain) | 1.17          | MPa               | ASTM D412   |
| Tensile Strength <sup>2</sup> (Break)     | 5.52          | MPa               | ASTM D412   |
| Tensile Elongation <sup>2</sup> (Break)   | 660           | %                 | ASTM D412   |
| Compression Set                           |               |                   | ASTM D395   |
| 23°C, 22 hr                               | 10            | %                 |             |
| 70°C, 22 hr                               | 57            | %                 |             |
| Hardness                                  | Nominal Value | Unit              | Test Method |
| Durometer Hardness                        |               |                   | ASTM D2240  |
| Shore A, 1 sec, Injection Molded          | 42            |                   |             |
| Shore A, 5 sec, Injection Molded          | 40            |                   |             |
| Additional Information                    | Nominal Value | Unit              |             |
| Adhesion to ABS                           |               |                   |             |
| Adhesion to PBT                           |               |                   |             |
| Adhesion to PC                            |               |                   |             |
| Adhesion to PC/ABS                        |               |                   |             |
| Adhesion to COPE                          |               |                   |             |

Revision Date: 7/16/2021

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### Processing Information

| Injection              | Nominal Value  | Unit |
|------------------------|----------------|------|
| Drying Temperature     | 80             | °C   |
| Drying Time            | 3.0 to 4.0     | hr   |
| Rear Temperature       | 193 to 232     | °C   |
| Middle Temperature     | 200 to 250     | °C   |
| Front Temperature      | 220 to 260     | °C   |
| Nozzle Temperature     | 220 to 260     | °C   |
| Processing (Melt) Temp | 220 to 260     | °C   |
| Mold Temperature       | 32 to 54       | °C   |
| Injection Pressure     | 1.38 to 5.52   | MPa  |
| Injection Rate         | Fast           |      |
| Back Pressure          | 0.172 to 0.689 | MPa  |
| Screw Speed            | 50 to 100      | rpm  |
| Cushion                | 3.81 to 25.4   | mm   |

### Injection Notes

Drying is strongly suggested to enhance bondability

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> Die C, 510 mm/min

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