



# Monprene® RG-20170

Teknor Apex Company - Thermoplastic Elastomer

## General Information

### Product Description

The Monprene RG-20100 series is a group of high performance thermoplastic elastomers specifically designed for extruded regulated applications including food contact, toys, and children's products. Monprene RG-20170 is a low density, medium hardness grade that complies with various US FDA and European regulations and directives for food contact and toy safety and is suitable for extrusion. Please contact Teknor Apex for a regulatory compliance letter.

### General

|                   |                                                                                                            |                                                                                            |                                                               |
|-------------------|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Material Status   | • Commercial: Active                                                                                       |                                                                                            |                                                               |
| Availability      | • Africa & Middle East<br>• Europe                                                                         | • Latin America<br>• North America                                                         |                                                               |
| Features          | • BPA Free<br>• Food Contact Acceptable<br>• Good Adhesion<br>• Good Colorability<br>• Good Processability | • Low Density<br>• Low Flow<br>• Low Specific Gravity<br>• Lubricated<br>• Medium Hardness | • No Animal Derived Components<br>• Slip<br>• Without Fillers |
| Uses              | • Consumer Applications<br>• Cosmetic Packaging<br>• Food Containers<br>• Food Packaging                   | • Food Service Applications<br>• Kitchenware<br>• Lids<br>• Non-specific Food Applications | • Rubber Replacement<br>• Toys                                |
| Agency Ratings    | • EU Food Contact                                                                                          | • FDA Food Contact                                                                         |                                                               |
| RoHS Compliance   | • RoHS Compliant                                                                                           |                                                                                            |                                                               |
| Appearance        | • Colors Available                                                                                         | • Natural Color                                                                            | • Translucent                                                 |
| Forms             | • Pellets                                                                                                  |                                                                                            |                                                               |
| Processing Method | • Extrusion                                                                                                |                                                                                            |                                                               |

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

| Physical                                 | Nominal Value | Unit     | Test Method |
|------------------------------------------|---------------|----------|-------------|
| Density / Specific Gravity               | 0.890         |          | ISO 1183    |
| 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 <sup>2</sup>              |               |          | ISO 37      |
| Across Flow : 100% Strain                | 417           | psi      |             |
| Flow : 100% Strain                       | 720           | psi      |             |
| Tensile Stress <sup>2</sup>              |               |          | ISO 37      |
| Across Flow : 300% Strain                | 559           | psi      |             |
| Flow : 300% Strain                       | 824           | psi      |             |
| Tensile Stress <sup>2</sup>              |               |          | ISO 37      |
| Across Flow : Break                      | 1530          | psi      |             |
| Flow : Break                             | 899           | psi      |             |
| Tensile Elongation <sup>2</sup>          |               |          | ISO 37      |
| Across Flow : Break                      | 780           | %        |             |
| Flow : Break                             | 180           | %        |             |
| Tear Strength <sup>3</sup>               |               |          | ISO 34-1    |
| Across Flow                              | 182           | lbf/in   |             |
| Flow                                     | 192           | lbf/in   |             |

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| Elastomers                       | Nominal Value | Unit | Test Method |
|----------------------------------|---------------|------|-------------|
| Compression Set <sup>4</sup>     |               |      | ISO 815     |
| 73°F, 22 hr                      | 27            | %    |             |
| 158°F, 22 hr                     | 44            | %    |             |
| Hardness                         | Nominal Value | Unit | Test Method |
| Shore Hardness                   |               |      | ISO 868     |
| Shore A, 1 sec, Injection Molded | 73            |      |             |
| Shore A, 5 sec, Injection Molded | 70            |      |             |

### Processing Information

| Extrusion             | Nominal Value | Unit |
|-----------------------|---------------|------|
| Cylinder Zone 1 Temp. | 300 to 320    | °F   |
| Cylinder Zone 2 Temp. | 320 to 400    | °F   |
| Cylinder Zone 3 Temp. | 340 to 420    | °F   |
| Cylinder Zone 4 Temp. | 360 to 440    | °F   |
| Cylinder Zone 5 Temp. | 360 to 441    | °F   |
| Die Temperature       | 360 to 440    | °F   |

### Extrusion Notes

Screw Speed: 30 to 100 rpm

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

### Notes

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

<sup>2</sup> 20 in/min

<sup>3</sup> Method Ba, Angle (Unnicked), 20 in/min

<sup>4</sup> Type A