

# Monprene® CP-10180 (PRELIMINARY DATA)

### Teknor Apex Company - Thermoplastic Elastomer

Friday, June 30, 2017

### **General Information**

#### **Product Description**

The Monprene CP-10100 Series of thermoplastic elastomer compounds, available in NAT or colors, from 40 to 90 Shore A, are designed specifically for consumer product applications requiring a soft, rubber-like feel. Monprene CP-10180 is a medium hardness, low density, unfilled grade that is suitable for injection molding.

| General           |  |  |   |
|-------------------|--|--|---|
| Material Status   | Preliminary Data   |  |   |
| Availability      | <ul><li>Africa &amp; Middle East</li><li>Asia Pacific</li></ul>  | <ul><li>Europe</li><li>Latin America</li></ul>   | North America   |
| Features          | <ul><li>Chemical Resistant</li><li>General Purpose</li><li>Good Adhesion</li></ul>   | <ul><li>Good Colorability</li><li>Good Flexibility</li><li>Good Processability</li></ul>   | <ul><li>Low Density</li><li>Low Specific Gravity</li><li>Medium Hardness</li></ul>                            |
| Uses              | <ul> <li>Appliances</li> <li>Consumer Applications</li> <li>Flexible Grips</li> <li>Furniture</li> <li>Handles</li> <li>Household Goods</li> </ul> | <ul><li>Knobs</li><li>Personal Care</li><li>Rubber Replacement</li><li>Safety Equipment</li><li>Soft Touch Applications</li><li>Sporting Goods</li></ul> | <ul><li>Stationary Supplies</li><li>Toys</li><li>Water Sports Equipment</li><li>Writing Instruments</li></ul> |
| RoHS Compliance   | <ul> <li>RoHS Compliant</li> </ul>   |  |   |
| Appearance        | <ul> <li>Colors Available</li> </ul>   | <ul> <li>Translucent</li> </ul>  |   |
| Forms             | • Pellets  |  |   |
| Processing Method | Injection Molding  |  |   |

| ASTM & ISO Properties 1                               |               |          |             |  |
|---|---------------|----------|-------------|--|
| Physical  | Nominal Value | Unit     | Test Method |  |
| Specific Gravity                                      | 0.890         |          | ISO 1183    |  |
| Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)              | 11            | g/10 min | ASTM D1238  |  |
| Elastomers  | Nominal Value | Unit     | Test Method |  |
| Tensile Stress - Across Flow (100% Strain)            | 470           | psi      | ISO 37      |  |
| Tensile Stress - Across Flow (Break)                  | 2030          | psi      | ISO 37      |  |
| Tensile Elongation - Across Flow (Break)              | 840           | %        | ISO 37      |  |
| Tear Strength <sup>2</sup>                            |               |          | ISO 34-1    |  |
| Across Flow   | 230           | lbf/in   |             |  |
| Flow  | 290           | lbf/in   |             |  |
| Compression Set <sup>3</sup> (158°F, 22 hr)           | 44            | %        | ISO 815     |  |
| Hardness  | Nominal Value | Unit     | Test Method |  |
| Shore Hardness (Shore A, 5 sec)                       | 80            |          | ISO 868     |  |
| Additional Information                                | Nominal Value | Unit     | Test Method |  |
| Apparent Shear Viscosity - Capillary, @ 206/s (392°F) | 260           | Pa·s     | ASTM D3835  |  |
| Lavel Ctatament                                       |               |          | 1           |  |

### **Legal Statement**

The information and recommendations contained in this bulletin are, to the best of our knowledge, accurate and reliable but no guarantee of their accuracy is made. All products are sold upon condition that purchasers shall make their own tests to determine the suitability of such products for their particular purposes and uses and purchaser assumes all risks and liability for the results of use of the products, including use in accordance with seller's recommendations. Nothing in this bulletin constitutes permission or a recommendation to practice or use any invention covered by any patent owned by this company or others. There is no warranty of merchantability and there are no other warranties for the products described. For detailed Product Stewardship information, please contact us. Any product of Teknor Apex including product names, shall not be used or tested in medical or food contact applications without the prior written acknowledgement of Teknor Apex as to the intended use. Please note that some products may not be available in one or more countries.

Revision Date: 6/1/2016

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| Processing Information |                |      |  |  |
|------------------------|----------------|------|--|--|
| Injection              | Nominal Value  | Unit |  |  |
| Rear Temperature       | 320 to 350     | °F   |  |  |
| Middle Temperature     | 360 to 400     | °F   |  |  |
| Front Temperature      | 380 to 420     | °F   |  |  |
| Nozzle Temperature     | 360 to 440     | °F   |  |  |
| Processing (Melt) Temp | 360 to 440     | °F   |  |  |
| Mold Temperature       | 80 to 120      | °F   |  |  |
| Injection Rate         | Moderate-Fast  |      |  |  |
| Back Pressure          | 25.0 to 100    | psi  |  |  |
| Screw Speed            | 50 to 100      | rpm  |  |  |
| Cushion                | 0.150 to 0.500 | 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).

#### Notes

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

<sup>2</sup> Method Ba, Angle (Unnicked)

<sup>3</sup> Type A

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