

# Monprene® OM-10165

Thermoplastic Elastomer

Teknor Apex Company

Message:

Monprene OM-10165 is designed for overmolding applications like grips and anti-skid parts for consumer products. Monprene OM-10165 is an opaque grade that exhibits excellent adhesion to nylon.

| General Information                       |                       |          |             |
|-------------------------------------------|-----------------------|----------|-------------|
| Features                                  | Low Specific Gravity  |          |             |
|                                           | Sunlight Resistant    |          |             |
|                                           | Without Fillers       |          |             |
|                                           | Low density           |          |             |
|                                           | smoothness            |          |             |
|                                           | Light stabilization   |          |             |
|                                           | Adhesiveness          |          |             |
|                                           | Medium liquidity      |          |             |
|                                           | Medium hardness       |          |             |
|                                           | UV absorption         |          |             |
| Uses                                      | Handle                |          |             |
|                                           | overmolding           |          |             |
|                                           | Electrical appliances |          |             |
|                                           | Power/other tools     |          |             |
|                                           | Soft handle           |          |             |
|                                           | Mobile phone          |          |             |
|                                           | Sporting goods        |          |             |
|                                           | Stationery            |          |             |
|                                           | Knob                  |          |             |
|                                           | Bonding               |          |             |
| Appearance                                | Opacity               |          |             |
| Forms                                     | Particle              |          |             |
| Processing Method                         | Injection molding     |          |             |
| Physical                                  | Nominal Value         | Unit     | Test Method |
| Specific Gravity                          | 0.918                 | g/cm³    | ASTM D792   |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) | 8.0                   | g/10 min | ASTM D1238  |
| Hardness                                  | Nominal Value         | Unit     | Test Method |
| Durometer Hardness                        |                       |          | ASTM D2240  |
| Shore A, 1 second, injection molding      | 67                    |          | ASTM D2240  |
| Shore A, 5 seconds, injection molding     | 65                    |          | ASTM D2240  |

| Elastomers                                                                                                    | Nominal Value          | Unit | Test Method |
|---------------------------------------------------------------------------------------------------------------|------------------------|------|-------------|
| Tensile Stress                                                                                                |                        |      | ASTM D412   |
| Transverse flow: 100% strain <sup>1</sup>                                                                     | 2.32                   | MPa  | ASTM D412   |
| Flow: 100% strain <sup>2</sup>                                                                                | 3.04                   | MPa  | ASTM D412   |
| Transverse flow: 300% strain <sup>3</sup>                                                                     | 3.67                   | MPa  | ASTM D412   |
| Flow: 300% strain <sup>4</sup>                                                                                | 4.81                   | MPa  | ASTM D412   |
| Tensile Strength <sup>5</sup>                                                                                 |                        |      | ASTM D412   |
| Transverse flow: Fracture                                                                                     | 5.32                   | MPa  | ASTM D412   |
| Flow: Fracture                                                                                                | 5.50                   | MPa  | ASTM D412   |
| Tensile Elongation <sup>6</sup>                                                                               |                        |      | ASTM D412   |
| Transverse flow: Fracture                                                                                     | 520                    | %    | ASTM D412   |
| Flow: Fracture                                                                                                | 440                    | %    | ASTM D412   |
| Tear Strength <sup>7</sup>                                                                                    |                        |      | ASTM D624   |
| Transverse flow                                                                                               | 29.2                   | kN/m | ASTM D624   |
| Flow                                                                                                          | 30.6                   | kN/m | ASTM D624   |
| Compression Set <sup>8</sup>                                                                                  |                        |      | ASTM D395B  |
| 23°C, 22 hr                                                                                                   | 29                     | %    | ASTM D395B  |
| 70°C, 22 hr                                                                                                   | 22                     | %    | ASTM D395B  |
| Additional Information                                                                                        | Nominal Value          |      |             |
| Adhesion to Nylon                                                                                             |                        |      |             |
| Injection                                                                                                     | Nominal Value          | Unit |             |
| Rear Temperature                                                                                              | 204 - 232              | °C   |             |
| Middle Temperature                                                                                            | 227 - 249              | °C   |             |
| Front Temperature                                                                                             | 249 - 266              | °C   |             |
| Nozzle Temperature                                                                                            | 266 - 277              | °C   |             |
| Processing (Melt) Temp                                                                                        | 266 - 277              | °C   |             |
| Mold Temperature                                                                                              | 23.9 - 60.0            | °C   |             |
| Injection Pressure                                                                                            | 1.38 - 6.89            | MPa  |             |
| Injection Rate                                                                                                | Fast                   |      |             |
| Back Pressure                                                                                                 | 0.172 - 0.862          | MPa  |             |
| Screw Speed                                                                                                   | 50 - 120               | rpm  |             |
| Cushion                                                                                                       | 3.81 - 25.4            | 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.                                                                                                            | Mouth die C, 510mm/min |      |             |
| 2.                                                                                                            | Mouth die C, 510mm/min |      |             |
| 3.                                                                                                            | C mold, 510mm/min      |      |             |
| 4.                                                                                                            | C mold, 510mm/min      |      |             |
| 5.                                                                                                            | C mold, 510mm/min      |      |             |
| 6.                                                                                                            | Mouth die C, 510mm/min |      |             |
| 7.                                                                                                            | C mold, 510mm/min      |      |             |

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#### Recommended distributors for this material

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