



Dynaflex™ G6703C

Thermoplastic Elastomer

Key Characteristics

Product Description

Dynaflex™ G6703C is an easy processing compound designed for use in injection molding applications where extremely soft feel properties are desired.

- Excellent Colorability
- Good Ozone and UV Stability
- High Elongation
- Tactile Feel
- Ultra Soft Touch

General

| | |
|-----------------------|--|
| Material Status | • Proprietary and/or Private |
| Regional Availability | • Asia Pacific |
| Features | • Good Colorability • Good UV Resistance • High Elongation • Ozone Resistant |
| Uses | • Consumer Applications • Soft Touch Applications • Toys • Transparent or Translucent Parts |
| Agency Ratings | • FDA Unspecified Rating |
| RoHS Compliance | • RoHS Compliant |
| Appearance | • Translucent |
| Forms | • Pellets |
| Processing Method | • Injection Molding |

Technical Properties ¹

| Physical | Typical Value (English) | Typical Value (SI) | Test Method |
|--|-------------------------|-------------------------|-------------|
| Specific Gravity | 0.900 | 0.898 g/cm ³ | ASTM D792 |
| Melt Mass-Flow Rate (MFR) | | | ASTM D1238 |
| 190°C/2.16 kg | 4.0 g/10 min | 4.0 g/10 min | |
| 200°C/5.0 kg | 75 g/10 min | 75 g/10 min | |
| Molding Shrinkage - Flow | 0.028 to 0.032 in/in | 2.8 to 3.2 % | ASTM D955 |
| Elastomers | Typical Value (English) | Typical Value (SI) | Test Method |
| Tensile Stress ^{2,3} (100% Strain, 73°F (23°C)) | 20.0 psi | 0.138 MPa | ASTM D412 |
| Tensile Stress ^{2,3} (300% Strain, 73°F (23°C)) | 40.0 psi | 0.276 MPa | ASTM D412 |
| Tensile Strength ^{2,3} (Break, 73°F (23°C)) | 550 psi | 3.79 MPa | ASTM D412 |
| Tensile Elongation ^{2,3} (Break, 73°F (23°C)) | 1000 % | 1000 % | ASTM D412 |
| Tear Strength | 40.0 lbf/in | 7.01 kN/m | ASTM D624 |
| Compression Set (73°F (23°C), 22.0 hr) | 8.0 % | 8.0 % | ASTM D395B |
| Hardness | Typical Value (English) | Typical Value (SI) | Test Method |
| Durometer Hardness (Shore A, 10 sec) | 3 | 3 | ASTM D2240 |
| Fill Analysis | Typical Value (English) | Typical Value (SI) | Test Method |
| Apparent Viscosity | | | ASTM D3835 |
| 392°F (200°C), 11200 sec ⁻¹ | 5.20 Pa·s | 5.20 Pa·s | |

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Processing Information

| Injection | Typical Value (English) | Typical Value (SI) |
|-----------------------|-------------------------|--------------------|
| Suggested Max Regrind | 20 % | 20 % |
| Rear Temperature | 290 to 340 °F | 143 to 171 °C |
| Middle Temperature | 300 to 350 °F | 149 to 177 °C |
| Front Temperature | 350 to 370 °F | 177 to 188 °C |
| Nozzle Temperature | 350 to 440 °F | 177 to 227 °C |
| Mold Temperature | 60.0 to 80.0 °F | 15.6 to 26.7 °C |
| Back Pressure | 0.00 to 110 psi | 0.00 to 0.758 MPa |
| Screw Speed | 40 to 100 rpm | 40 to 100 rpm |

Injection Notes

Color concentrates with polypropylene (PP), ethylene vinyl acetate (EVA), or low density polyethylene (PE) carriers are most suitable for coloring Dynaflex™ G6703C. Improved color dispersion can be achieved by using higher melt flow concentrates (with a melt flow from 25 - 40 g/10 min). Typical loadings for color concentrates are 1% to 5% by weight. Liquid color can be used, however mineral oil based carriers may have a significant effect on the final hardness value. Concentrates based on PVC should not be used. A high color match consistency can be obtained by using precolored compounds available from GLS. The final determination of color concentrate suitability should be determined by customer trials.

Purge thoroughly before and after use of this product with a low flow (0.5 - 2.5 MFR) polyethylene (PE) or polypropylene (PP).

Regrind levels up to 20% can be used with Dynaflex™ G6703C with minimal property loss, provided that the regrind is free of contamination. To minimize losses during molding, the melt temperature should remain as low as possible. The final determination of regrind effectiveness should be determined by the customer.

Dynaflex™ G6703C has excellent melt stability. Maximum residence times may vary, depending on the size of the barrel. Generally, the barrel should be emptied if it is idle for periods of 8 - 10 minutes or longer.

Drying is not Required

Injection Speed: 1 to 3 in/sec
 1st Stage - Boost Pressure: 125 to 700 psi
 2nd Stage - Hold Pressure: 30% of Boost
 Hold Time (Thick Part): 3 to 10 sec
 Hold Time (Thin Part): 1 to 3 sec

Notes

- ¹ Typical values are not to be construed as specifications.
- ² Die C
- ³ 2 hr

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