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/cm³	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	

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 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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