

Dynaflex™ G2703C

Thermoplastic Elastomer

Key Characteristics

Product Description

Dynaflex™ G2703C is an easy processing TPE designed for injection molding and extrusion applications that require FDA compliance and a low coefficient of friction.

- Adhesion to Polypropylene
- Excellent Colorability
- Improved Mold Release
- Rubbery Feel
- Soft Touch

General

Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Latin America • North America	
Features	• Good Colorability • Good Mold Release	• Low Friction • Ozone Resistant	• Recyclable Material • UV Resistant
Uses	• Consumer Applications • Overmolding	• Personal Care • Soft Touch Applications	• Transparent or Translucent Parts
Agency Ratings	• FDA Unspecified Rating ¹		
RoHS Compliance	• RoHS Compliant		
Appearance	• Translucent		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

Technical Properties ²

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	0.900	0.900	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	25 g/10 min	25 g/10 min	
Molding Shrinkage - Flow	9.0E-3 to 0.015 in/in	0.90 to 1.5 %	ASTM D955
Elastomers	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Stress ^{3, 4} (100% Strain, 73°F (23°C))	310 psi	2.14 MPa	ASTM D412
Tensile Stress ^{3, 4} (300% Strain, 73°F (23°C))	514 psi	3.54 MPa	ASTM D412
Tensile Strength ^{3, 4} (Break, 73°F (23°C))	1070 psi	7.38 MPa	ASTM D412
Tensile Elongation ^{3, 4} (Break, 73°F (23°C))	700 %	700 %	ASTM D412
Tear Strength	180 lbf/in	31.5 kN/m	ASTM D624
Compression Set (73°F (23°C), 22 hr)	21 %	21 %	ASTM D395B
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Durometer Hardness (Shore A, 10 sec)	60	60	ASTM D2240
Fill Analysis	Typical Value (English)	Typical Value (SI)	Test Method
Apparent Viscosity 392°F (200°C), 11200 sec ⁻¹	10.7 Pa·s	10.7 Pa·s	ASTM D3835

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Additional Information

Dynaflex™ G2703C can be recycled as a filler or impact modifier for polyolefins, or can be recycled by grinding and reintroduction to the molding process. Similar to PP or PE recycling process, if separated appropriately, it can be recycled many times.

Municipality waste stream recycle code is "7" which is designated for "Other".

Please contact GLS Thermoplastic Elastomers for a copy of our Recyclability Compliance letter.

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Rear Temperature	320 to 350 °F	160 to 177 °C
Middle Temperature	340 to 370 °F	171 to 188 °C
Front Temperature	350 to 420 °F	177 to 216 °C
Nozzle Temperature	350 to 420 °F	177 to 216 °C
Mold Temperature	60 to 100 °F	16 to 38 °C
Back Pressure	0.00 to 150 psi	0.00 to 1.03 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 (LDPE) carriers are most suitable for coloring Dynaflex™ G2703C. 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, but 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).

Dynaflex™ G2703C 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.

Regrind levels up to 20% can be used with Dynaflex™ G2703C 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.

Drying is not Required

Injection Speed: 1 to 5 in/sec
 1st Stage - Boost Pressure: 200 to 600 psi
 2nd Stage - Hold Pressure: 70% of Boost
 Hold Time (Thick Part): 4 to 10 sec
 Hold Time (Thin Part): 1 to 3 sec

Notes

- ¹ Please contact GLS Thermoplastic Elastomers for copy of FDA compliance letter.
- ² Typical values are not to be construed as specifications.
- ³ Die C
- ⁴ 2 hr

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