Dynaflex™ G2701C
Thermoplastic Elastomer

Key Characteristics

Product Description

Dynaflex™ G2701C is an easy processing TPE designed for injection molding and extrusion applications that require FDA compliance.

- Adhesion to Polypropylene
- Excellent Colorability
- Rubbery Feel
- Soft Touch

General		
Material Status	• Commercial: Active	
Regional Availability	• Asia Pacific	
Features	• Good Colorability • Good Processability	• Good Stability • Recyclable Material
Uses	• Consumer Applications • Overmolding	• Personal Care • Transparent or Translucent Parts
Agency Ratings	• FDA 21 CFR 177.2600 [1]	
RoHS Compliance	• RoHS Compliant	
Appearance	• Clear/Transparent	
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
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [3, 4] (300% Strain, 73°F (23°C))	645 psi	4.45 MPa	ASTM D412
Tensile Strength [3, 4] (Break, 73°F (23°C))	900 psi	6.21 MPa	ASTM D412
Tensile Elongation [3, 4] (Break, 73°F (23°C))	600 %	600 %	ASTM D412
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	65	65	ASTM D2240
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 1340 sec^-1	42.8 Pa·s	42.8 Pa·s	
392°F (200°C), 11200 sec^-1	10.5 Pa·s	10.5 Pa·s	

Additional Information

Dynaflex™ G2701C 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)
Suggested Max Regrind	20 %	20 %
Rear Temperature	270 to 340 °F	132 to 171 °C
Middle Temperature	310 to 380 °F	154 to 193 °C
Front Temperature	335 to 405 °F	168 to 207 °C
Nozzle Temperature	335 to 405 °F	168 to 207 °C
Mold Temperature	60 to 80 °F	16 to 27 °C
Back Pressure	50.0 to 150 psi	0.345 to 1.03 MPa
Screw Speed	25 to 75 rpm	25 to 75 rpm

Injection Notes

Color concentrates with polypropylene (PP), ethylene vinyl acetate (EVA), or low density polyethylene (LDPE) carriers are most suitable for coloring Dynaflex™ G2701C. Improved color dispension 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).

Regrind levels up to 20% can be used with Dynaflex™ G2701C 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™ G2701C 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 5 in/sec
1st Stage - Boost Pressure: 350 to 650 psi
2nd Stage - Hold Pressure: 50% 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 a copy of the FDA compliance letter.

[2] Typical values are not to be construed as specifications.

[3] Die C

[4] 2 hr