Dynaflex™ G2703-1000-00

Thermoplastic Elastomer

Key Characteristics

Product Description

Dynaflex™ G2703-1000-00 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
- Good Ozone And UV Resistance
- Improved Mold Release
- Rubbery Feel
- Soft Touch

General			
Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • North America	• South America
Features	• Good Colorability • Good Mold Release	• Good UV Resistance • Ozone Resistant	
Uses	• Consumer Applications • Overmolding	• Personal Care • Soft Touch Applications	• Transparent or Translucent Parts
Agency Ratings	• EU 2002/72/EC [1]	• FDA 21 CFR 177.1210 [2]	
RoHS Compliance	• RoHS Compliant		
Appearance	• Translucent		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

Technical Properties [3]

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	25 g/10 min	25 g/10 min	
Molding Shrinkage - Flow	0.0090 to 0.015 in/in	0.90 to 1.5 %	ASTM D955
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [4, 5] (100% Strain, 73°F (23°C))	310 psi	2.14 MPa	ASTM D412
Tensile Stress [4, 5] (300% Strain, 73°F (23°C))	540 psi	3.72 MPa	ASTM D412
Tensile Strength [4, 5] (Break, 73°F (23°C))	1160 psi	8.00 MPa	ASTM D412
Tensile Elongation [4, 5] (Break, 73°F (23°C))	690 %	690 %	ASTM D412
Tear Strength	180 lbf/in	31.5 kN/m	ASTM D624
Compression Set (73°F (23°C), 22.0 hr)	21 %	21 %	ASTM D395B
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	58	58	ASTM D2240
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 11200 sec^-1	10.7 Pa·s	10.7 Pa·s	

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	60.0 to 100 °F	15.6 to 37.8 °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™ G2703-1000-00. 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™ G2703-1000-00 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: 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 a copy of the EU compliance letter.

[2] Please contact GLS Thermoplastic Elastomers for copy of FDA compliance letter.

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

[4] Die C

[5] 2 hr

PolyOne Americas
33587 Walker Road
Avon Lake, Ohio 44012
United States
+1 440 930 1000
+1 866 POLYONE

PolyOne Asia
No. 88 Guoshoujing Road
Z.J Hi-tech Park, Pudong
Shanghai, 201203, China
+86 (0) 21 5080 1188

PolyOne Europe
6 Giällewee
Please Call Assesse
Belgium Phone Number +32
(0) 83 660 211