

PolyOne Dynaflex™ G2703-1000-00 Thermoplastic Elastomer (TPE)

Category : Polymer , Thermoplastic , Elastomer, TPE

Material Notes:

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 Dynaflex™ G2703-1000-00 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. 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. Regrind levels up to 20% can be used with Dynaflex™ G2703-1000-00 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 Information provided by PolyOne

Order this product through the following link:

http://www.lookpolymers.com/polymer_PolyOne-Dynaflex-G2703-1000-00-Thermoplastic-Elastomer-TPE.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.898 g/cc	0.898 g/cc	ASTM D792
Viscosity	10700 cP	10700 cP	ASTM D3835
	@Shear Rate 11200 1/s, Temperature 200 °C	@Shear Rate 11200 1/s, Temperature 392 °F	
Linear Mold Shrinkage, Flow	0.0090 - 0.015 cm/cm	0.0090 - 0.015 in/in	ASTM D955
Melt Flow	4.0 g/10 min	4.0 g/10 min	ASTM D1238
	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	
	25 g/10 min	25 g/10 min	ASTM D1238
	@Load 5.00 kg, Temperature 200 °C	@Load 11.0 lb, Temperature 392 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	60	60	10 sec; ASTM D2240
Tensile Strength at Break	7.38 MPa @Temperature 23.0 °C	1070 psi @Temperature 73.4 °F	Die C2 hr; ASTM D412
Tensile Stress	2.14 MPa @Strain 100 %, Temperature 23.0 °C	310 psi @Strain 100 %, Temperature 73.4 °F	Die C2 hr; ASTM D412
	3.54 MPa @Strain 300 %, Temperature 23.0 °C	513 psi @Strain 300 %, Temperature 73.4 °F	Die C2 hr; ASTM D412
Elongation at Break	700 % @Temperature 23.0 °C	700 % @Temperature 73.4 °F	Die C2 hr; ASTM D412
Tear Strength	31.5 kN/m	180 pli	ASTM D624
Compression Set	21 % @Temperature 23.0 °C, Time 79200 sec	21 % @Temperature 73.4 °F, Time 22.0 hour	ASTM D395B

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	160 - 177 °C	320 - 351 °F	
Middle Barrel Temperature	171 - 188 °C	340 - 370 °F	
Front Barrel Temperature	177 - 216 °C	351 - 421 °F	
Nozzle Temperature	177 - 216 °C	351 - 421 °F	
Mold Temperature	15.6 - 37.8 °C	60.1 - 100 °F	
Back Pressure	0.000 - 1.03 MPa	0.000 - 149 psi	
Screw Speed	40 - 100 rpm	40 - 100 rpm	

Descriptive Properties	Value	Comments
Agency Ratings	FDA 21 CFR 177.1210	Please contact GLS Thermoplastic Elastomers for copy of FDA compliance letter.
Appearance	Translucent	
Features	Good Colorability	
	Good Mold Release	

Descriptive Properties	Good UV Resistance Value	Comments
	Low Friction	
	Ozone Resistant	
	Recyclable Material	
Forms	Pellets	
Generic Material	TPE	
Generic Name	Thermoplastic Elastomer (TPE)	
Manufacturer / Supplier	GLS Thermoplastic Elastomers	
Processing Method	Extrusion	
	Injection Molding	
Regional Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
RoHS Compliance	RoHS Compliant	
Uses	Consumer Applications	
	Overmolding	
	Personal Care	
	Soft Touch Applications	
	Transparent or Translucent Parts	

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