

PolyOne Dynaflex™ G7431-1001-00 Thermoplastic Elastomer (TPE)

Category : Polymer , Thermoplastic , Elastomer, TPE

Material Notes:

Dynaflex™ G7431-1001-00 is an easy processing, performance TPE designed for use in applications requiring a tough, durable material with a low coefficient of friction. - Excellent Heat Stability - Excellent Tear Strength - Good Ozone/UV Stability - Overmold Adhesion to Polypropylene - Superior Molded Aesthetics Dynaflex™ G7431-1001-00 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 polyethylene (PE) carriers are most suitable for coloring Dynaflex™ G7431-1001-00. 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). Regrind levels up to 20% can be used with Dynaflex™ G7431-1001-00 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 the regrind effectiveness should be determined by the customer. Dynaflex™ G7431-1001-00 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 3 in/sec 1st Stage - Boost Pressure: 250 to 800 psi 2nd Stage - Hold Pressure: 30% of Boost Hold Time (Thick Part): 3 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-G7431-1001-00-Thermoplastic-Elastomer-TPE.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.918 g/cc	0.918 g/cc	ASTM D792
Viscosity	13700 cP	13700 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	2.0 g/10 min	2.0 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	66	66	10 sec; ASTM D2240
	10.8 MPa	1570 psi	

Tensile Strength at Break Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	Die C2 hr: ASTM D412 Comments
Tensile Stress	2.69 MPa @Strain 100 %, Temperature 23.0 °C	390 psi @Strain 100 %, Temperature 73.4 °F	Die C2 hr; ASTM D412
	4.14 MPa @Strain 300 %, Temperature 23.0 °C	600 psi @Strain 300 %, Temperature 73.4 °F	Die C2 hr; ASTM D412
Elongation at Break	610 % @Temperature 23.0 °C	610 % @Temperature 73.4 °F	Die C2 hr; ASTM D412
Tear Strength	35.0 kN/m	200 pli	ASTM D624
Compression Set	18 % @Temperature 23.0 °C, Time 79200 sec	18 % @Temperature 73.4 °F, Time 22.0 hour	ASTM D395B

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	171 - 188 °C	340 - 370 °F	
Middle Barrel Temperature	177 - 193 °C	351 - 379 °F	
Front Barrel Temperature	182 - 221 °C	360 - 430 °F	
Nozzle Temperature	188 - 221 °C	370 - 430 °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 Unspecified Rating	
Appearance	Natural Color	
Features	Copper Contact Stabilized	
	Good Surface Finish	
	Good Tear Strength	
	Good Thermal Stability	
	Good UV Resistance	

Descriptive Properties	Ozone Resistant Value	Comments
	Recyclable Material	
Forms	Pellets	
Generic Material	TPE	
Generic Name	Thermoplastic Elastomer (TPE)	
Manufacturer / Supplier	GLS Thermoplastic Elastomers	
Processing Method	Injection Molding	
Regional Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
RoHS Compliance	RoHS Compliant	
Suggested Max Regrind	20%	
Uses	Appliance Components	
	Consumer Applications	
	Electrical/Electronic Applications	
	Lawn and Garden Equipment	
	Outdoor Applications	
	Overmolding	

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