Dynaflex™ G7431-1001-00

Thermoplastic Elastomer

Key Characteristics

Product Description

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

General

Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Copper Contact Stabilized • Good Surface Finish • Good Tear Strength	• Good Thermal Stability • Good UV Resistance • Ozone Resistant	• Recyclable Material
Uses	• Appliance Components • Consumer Applications	• Electrical/Electronic Applications • Lawn and Garden Equipment	• Outdoor Applications • Overmolding
Agency Ratings	• FDA Unspecified Rating		
RoHS Compliance	• RoHS Compliant		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Specific Gravity	0.920	0.920	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	2.0 g/10 min	2.0 g/10 min	ASTM D1238
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 [2, 3] (100% Strain, 73°F (23°C))	390 psi	2.69 MPa	ASTM D412
Tensile Stress [2, 3] (300% Strain, 73°F (23°C))	600 psi	4.14 MPa	ASTM D412
Tensile Strength [2, 3] (Break, 73°F (23°C))	1570 psi	10.8 MPa	ASTM D412
Tensile Elongation [2, 3] (Break, 73°F (23°C))	610 %	610 %	ASTM D412
Tear Strength	200 lbf/in	35.0 kN/m	ASTM D624
Compression Set (73°F (23°C), 22 hr)	18 %	18 %	ASTM D395B
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	66	66	ASTM D2240
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 11200 sec^-1	13.7 Pa·s	13.7 Pa·s	

Additional Information

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.

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Suggested Max Regrind	20 %	20 %
Rear Temperature	340 to 370 °F	171 to 188 °C
Middle Temperature	350 to 380 °F	177 to 193 °C
Front Temperature	360 to 430 °F	182 to 221 °C
Nozzle Temperature	370 to 430 °F	188 to 221 °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 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

Notes

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

[2] Die C

[3] 2 hr

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