Dynaflex™ G2712-1000-02

Thermoplastic Elastomer

Key Characteristics

Product Description

Dynaflex™ G2712-1000-02 is an easy processing TPE designed for injection molding and extrusion applications that require FDA compliance.

- Excellent Colorability
- High Flow For Thin-Wall Parts
- Overmold Adhesion to Polypropylene
- Rubbery Feel
- Soft Touch

General			
Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Good Colorability • High Flow	• Ozone Resistant • Recyclable Material	• UV Resistant
Uses	• Consumer Applications • Overmolding	• Personal Care • Thin-walled Parts	• Transparent or Translucent Parts
Agency Ratings	• FDA 21 CFR 177.1210 [1]		
RoHS Compliance	• RoHS Compliant		
Appearance	• Translucent		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

Technical Properties [2]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	0.890	0.890	ASTM D792
Molding Shrinkage - Flow	0.013 to 0.019 in/in	1.3 to 1.9 %	ASTM D955
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [3, 4] (100% Strain, 73°F (23°C))	190 psi	1.31 MPa	ASTM D412
Tensile Stress [3, 4] (300% Strain, 73°F (23°C))	300 psi	2.07 MPa	ASTM D412
Tensile Strength [3, 4] (Break, 73°F (23°C))	820 psi	5.65 MPa	ASTM D412
Tensile Elongation [3, 4] (Break, 73°F (23°C))	700 %	700 %	ASTM D412
Tear Strength [3, 4] (73°F (23°C))	110 lbf/in	19.3 kN/m	ASTM D624
Compression Set (73°F (23°C), 22 hr)	17 %	17 %	ASTM D395B
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	43	43	ASTM D2240
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 11200 sec^-1	8.90 Pa·s	8.90 Pa·s	

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Additional Information
Dynaflex™ G2712-1000-02 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	300 to 350 °F	149 to 177 °C
Middle Temperature	340 to 370 °F	171 to 188 °C
Front Temperature	360 to 430 °F	182 to 221 °C
Nozzle Temperature	360 to 430 °F	182 to 221 °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 (PE) carrier are most suitable for coloring Dynaflex™ G2712-1000-02. Improved color dispersion can be achieved by using higher melt flow concentrates (with a melt flow from 20 - 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™ G2712-1000-02 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™ G2712-1000-02 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: 100 to 500 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 FDA compliance letter.

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

[3] Die C

[4] 2 hr

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