Dynaflex™ G2706-1000-00

Thermoplastic Elastomer

Key Characteristics

Product Description

Dynaflex™ G2706-1000-00 is an easy processing TPE designed for injection molding and extrusion applications that require FDA and medical compliance.

- High Puncture Reseal
- Overmold Adhesion to Polypropylene
- Rubbery Feel
- Soft Touch

General

Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Latin America • North America	
Features	• Good Colorability • Good Processing Stability	• Recyclable Material • Soft	
Uses	• Consumer Applications • Gaskets • Medical/Healthcare Applications	• Overmolding • Personal Care • Seals	• Soft Touch Applications
Agency Ratings	• EU 10/2011 [1] • FDA 21 CFR 177.1210 [2]	• ISO 10993 Part 4 • ISO 10993 Part 5	• USP Class VI [3]
RoHS Compliance	• RoHS Compliant		
Automotive Specifications	• FMVSS 302		
Appearance	• Translucent		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

Technical Properties [4]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	0.890	0.890	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	1.0 g/10 min	1.0 g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.045 to 0.055 in/in	4.5 to 5.5 %	ASTM D955
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [5, 6] (100% Strain, 73°F (23°C))	90.0 psi	0.621 MPa	ASTM D412
Tensile Stress [5, 6] (300% Strain, 73°F (23°C))	273 psi	1.88 MPa	ASTM D412
Tensile Strength [5, 6] (Break, 73°F (23°C))	800 psi	5.52 MPa	ASTM D412
Tensile Elongation [5, 6] (Break, 73°F (23°C))	660 %	660 %	ASTM D412
Tear Strength	80.0 lbf/in	14.0 kN/m	ASTM D624
Compression Set (73°F (23°C), 22 hr)	8.0 %	8.0 %	ASTM D395B
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	28	28	ASTM D2240
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 11200 sec^-1	22.6 Pa·s	22.6 Pa·s	

Additional Information

Dynaflex™ G2706-1000-00 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.

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Suggested Max Regrind	20 %	20 %
Rear Temperature	320 to 390 °F	160 to 199 °C
Middle Temperature	340 to 410 °F	171 to 210 °C
Front Temperature	370 to 440 °F	188 to 227 °C
Nozzle Temperature	370 to 440 °F	188 to 227 °C
Mold Temperature	60 to 100 °F	16 to 38 °C
Back Pressure	0.00 to 110 psi	0.00 to 0.758 MPa
Screw Speed	25 to 75 rpm	25 to 75 rpm

Injection Notes

Color concentrates with polyproplene (PP), ethylene vinyl acetate (EVA), or low density polyethylene (LDPE) carriers are most suitable for coloring Dynaflex™ G2706-1000-00. 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 an 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™ G2706-1000-00 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.

Dynaflex™ G2706-1000-00 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: 450 to 1000 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] Please contact GLS Thermoplastic Elastomers for a copy of the EU compliance letter.

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

[3] Please contact PolyOne GLS Thermoplastic Elastomers for a complete copy of the GLS Healthcare Policy.
1. The Customer must notify GLS of any FDA Class I and/or European Union Class I medical devices for each specific product and application.
2. The Customer shall not knowingly manufacture, use, sell or otherwise supply, directly or indirectly products or compounds made from GLS products in any of the following without prior written approval by GLS for each specific product or application:
a. Cosmetics
b. Drugs and other Pharmaceuticals
c. Temporary or permanent implantation in the human body, regardless of the intended duration of implantation
d. Class II and Class III Medical Devices as defined in 21 CFR 860.3 ("Medical Devices")
e. Class IIa, IIb and III as defined in Directive 93/42/EEC

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

[5] Die C

[6] 2 hr

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