



# Dynaflex™ G7660-1 (Natural)

## Thermoplastic Elastomer

### Key Characteristics

Product Description	
Dynaflex™ G7660-1 (Natural) is an easy processing, general purpose TPE designed for a wide variety of applications, including those where FDA compliance is required. <ul style="list-style-type: none"> <li>• Overmold Adhesion to Polypropylene</li> <li>• Rubbery Feel</li> <li>• Soft Touch</li> </ul>	
General	
Material Status	• Commercial: Active
Regional Availability	• Asia Pacific
Features	<ul style="list-style-type: none"> <li>• General Purpose</li> <li>• Good Colorability</li> </ul> <ul style="list-style-type: none"> <li>• Good Flow</li> <li>• Good Processability</li> </ul> <ul style="list-style-type: none"> <li>• Good Processing Stability</li> </ul>
Uses	<ul style="list-style-type: none"> <li>• Overmolding</li> <li>• Seals</li> </ul> <ul style="list-style-type: none"> <li>• Soft Touch Applications</li> <li>• Sporting Goods</li> </ul>
Agency Ratings	• FDA 21 CFR 177.1210 <sup>1</sup>
RoHS Compliance	• RoHS Compliant
Appearance	• Natural Color
Forms	• Pellets
Processing Method	<ul style="list-style-type: none"> <li>• Extrusion</li> <li>• Injection Molding</li> </ul>

### Technical Properties<sup>2</sup>

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Specific Gravity	1.18	1.18 g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	3.0 g/10 min	3.0 g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.0090 to 0.015 in/in	0.90 to 1.5 %	ASTM D955
Elastomers	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Stress <sup>3,4</sup> (100% Strain, 73°F (23°C))	310 psi	2.14 MPa	ASTM D412
Tensile Stress <sup>3,4</sup> (300% Strain, 73°F (23°C))	440 psi	3.03 MPa	ASTM D412
Tensile Strength <sup>3,4</sup> (Break, 73°F (23°C))	930 psi	6.41 MPa	ASTM D412
Tensile Elongation <sup>3,4</sup> (Break, 73°F (23°C))	710 %	710 %	ASTM D412
Tear Strength	150 lbf/in	26.3 kN/m	ASTM D624
Compression Set (73°F (23°C), 22.0 hr)	17 %	17 %	ASTM D395B
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Durometer Hardness (Shore A, 10 sec)	61	61	ASTM D2240
Fill Analysis	Typical Value (English)	Typical Value (SI)	Test Method
Apparent Viscosity 392°F (200°C), 11200 sec <sup>-1</sup>	9.70 Pa·s	9.70 Pa·s	ASTM D3835

### Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Suggested Max Regrind	20 %	20 %
Rear Temperature	320 to 350 °F	160 to 177 °C
Middle Temperature	350 to 380 °F	177 to 193 °C
Front Temperature	370 to 430 °F	188 to 221 °C

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Injection	Typical Value (English)	Typical Value (SI)
Nozzle Temperature	380 to 440 °F	193 to 227 °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 low density polyethylene (PE) carriers are most suitable for coloring Dynaflex™ G7660-1 (Natural). 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. Concentrates based on PVC should not be used. 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™ G7660-1 (Natural) 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™ G7660-1 (Natural) 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: 350 to 900 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**

- <sup>1</sup> Please contact GLS Thermoplastic Elastomers for a copy of the FDA compliance letter.
- <sup>2</sup> Typical values are not to be construed as specifications.
- <sup>3</sup> Die C
- <sup>4</sup> 2 hr

<b>PolyOne Americas</b>	<b>PolyOne Asia</b>	<b>PolyOne Europe</b>
33587 Walker Road	No. 88 Guoshoujing Road	6 Giällewee
Avon Lake, Ohio 44012	Z.J Hi-tech Park, Pudong	Please Call Assesse
United States	Shanghai, 201203, China	Belgium Phone Number +32
+1 440 930 1000	+86 (0) 21 5080 1188	(0) 83 660 211
+1 866 POLYONE		

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