



Dynaflex™ G7970-9C

Thermoplastic Elastomer

Key Characteristics

General	
Material Status	• Proprietary and/or Private
Regional Availability	• Asia Pacific
Features	<ul style="list-style-type: none"> • General Purpose • Good Flow • Good Processability • Good Processing Stability • Recyclable Material
Uses	<ul style="list-style-type: none"> • Consumer Applications • Flexible Grips • Gaskets • General Purpose • Overmolding
Agency Ratings	• UL 94 .QMFZ2.E76261
RoHS Compliance	• RoHS Compliant
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding

Technical Properties ¹

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Specific Gravity	1.18	1.18 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	21 g/10 min	21 g/10 min	ASTM D1238
Molding Shrinkage - Flow	6.0E-3 to 0.014 in/in	0.60 to 1.4 %	ASTM D955
Elastomers	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Stress ^{2,3} (100% Strain, 73°F (23°C))	380 psi	2.62 MPa	ASTM D412
Tensile Stress ^{2,3} (300% Strain, 73°F (23°C))	450 psi	3.10 MPa	ASTM D412
Tensile Strength ^{2,3} (Break, 73°F (23°C))	955 psi	6.58 MPa	ASTM D412
Tensile Elongation ^{2,3} (Break, 73°F (23°C))	720 %	720 %	ASTM D412
Tear Strength	160 lbf/in	28.0 kN/m	ASTM D624
Compression Set (73°F (23°C), 22 hr)	19 %	19 %	ASTM D395B
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Durometer Hardness (Shore A, 10 sec)	70	70	ASTM D2240
Flammability	Typical Value (English)	Typical Value (SI)	Test Method
Flame Rating (0.0591 in (1.50 mm))	HB	HB	UL 94
Fill Analysis	Typical Value (English)	Typical Value (SI)	Test Method
Apparent Viscosity			ASTM D3835
392°F (200°C), 1340 sec ⁻¹	40.1 Pa·s	40.1 Pa·s	
392°F (200°C), 11200 sec ⁻¹	8.80 Pa·s	8.80 Pa·s	

Additional Information

Dynaflex™ G7970-9C 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.

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Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Suggested Max Regrind	20 %	20 %
Rear Temperature	330 to 350 °F	166 to 177 °C
Middle Temperature	350 to 380 °F	177 to 193 °C
Front Temperature	370 to 440 °F	188 to 227 °C
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 120 psi	0.00 to 0.827 MPa
Screw Speed	40 to 100 rpm	40 to 100 rpm

Injection Notes

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™ G7970-9C (Black) 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™ G7970-9C 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): 2 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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