



Dynaflex™ G7650-9 (Black)

Thermoplastic Elastomer

Key Characteristics

Product Description

Dynaflex™ G7650-9 (Black) is an easy processing, general purpose TPE designed for a wide variety of applications, including those where FDA compliance is required.

- Overmold Adhesion to Polypropylene
- Rubbery Feel
- Soft Touch

General

Material Status	• Commercial: Active
Regional Availability	• Asia Pacific
Features	• General Purpose • Good Flow • Good Processability • Good Processing Stability
Uses	• Consumer Applications • Flexible Grips • Gaskets • General Purpose • Overmolding • Seals • Soft Touch Applications • Sporting Goods
Agency Ratings	• FDA 21 CFR 177.1210 ¹
RoHS Compliance	• RoHS Compliant
Appearance	• Black
Forms	• Pellets
Processing Method	• Extrusion • Injection Molding

Technical Properties ²

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Specific Gravity	1.17	1.17	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	9.0 g/10 min	9.0 g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.011 to 0.019 in/in	1.1 to 1.9 %	ASTM D955
Elastomers	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Stress ^{3, 4} (100% Strain, 73°F (23°C))	220 psi	1.52 MPa	ASTM D412
Tensile Stress ^{3, 4} (300% Strain, 73°F (23°C))	400 psi	2.76 MPa	ASTM D412
Tensile Strength ^{3, 4} (Break, 73°F (23°C))	700 psi	4.83 MPa	ASTM D412
Tensile Elongation ^{3, 4} (Break, 73°F (23°C))	700 %	700 %	ASTM D412
Tear Strength	117 lbf/in	20.5 kN/m	ASTM D624
Compression Set (73°F (23°C), 22 hr)	12 %	12 %	ASTM D395B
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Durometer Hardness (Shore A, 10 sec)	48	48	ASTM D2240
Fill Analysis	Typical Value (English)	Typical Value (SI)	Test Method
Apparent Viscosity			ASTM D3835
392°F (200°C), 1340 sec ⁻¹	46.8 Pa·s	46.8 Pa·s	
392°F (200°C), 11200 sec ⁻¹	9.10 Pa·s	9.10 Pa·s	

Copyright © 2015 PolyOne Corporation. PolyOne makes no representations, guarantees, or warranties of any kind with respect to the Information contained in this document about its accuracy, suitability for particular applications, or the results obtained or obtainable using the information. Some of the Information arises from laboratory work with small-scale equipment which may not provide a reliable indication of performance or properties obtained or obtainable on larger-scale equipment. Values reported as "typical" or stated without a range do not state minimum or maximum properties; consult your sales representative for property ranges and min/max specifications. Processing conditions can cause material properties to shift from the values stated in the Information. PolyOne makes no warranties or guarantees respecting suitability of either PolyOne's products or the Information for your process or end-use application. You have the responsibility to conduct full-scale end-product performance testing to determine suitability in your application, and you assume all risk and liability arising from your use of the Information and/or use or handling of any product. POLYONE MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, either with respect to the Information or products reflected by the Information. This data sheet shall NOT operate as permission, recommendation, or inducement to practice any patented invention without permission of the patent owner.

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 370 °F	177 to 188 °C
Front Temperature	370 to 420 °F	188 to 216 °C
Nozzle Temperature	370 to 440 °F	188 to 227 °C
Mold Temperature	60.0 to 80.0 °F	15.6 to 26.7 °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

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™ G7650-9 (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™ G7650-9 (Black) 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: 350 to 750 psi
 2nd Stage - Hold Pressure: 50% 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

CONTACT INFORMATION

Americas	Asia	Europe
United States - Avon Lake +1 440 930 1000	China - Guangzhou +86 20 8732 7260	Germany - Gaggenau +49 7225 6802 0
United States - McHenry +1 815 385 8500	China - Shenzhen +86 755 2969 2888	Spain - Barbaastro (Huesca) +34 974 310 314
	China - Suzhou +86 512 6823 24 38	
	China - Suzhou +86 512 6265 2600	
	Hong Kong - +852 2690 5332	
	Taiwan - Yonghe City, +886 9396 99740, +886 2929 1849	



Beyond Polymers.

Better Business Solutions. SM

www.polyone.com

PolyOne Americas	PolyOne Asia	PolyOne Europe
33587 Walker Road Avon Lake, Ohio 44012 United States +1 440 930 1000 +1 866 POLYONE	No. 88 Guoshoujing Road Z.J Hi-tech Park, Pudong Shanghai, 201203, China +86 21 5080 1188	6 Giällewee +352 269 050 35

Copyright ©, 2015 PolyOne Corporation. PolyOne makes no representations, guarantees, or warranties of any kind with respect to the Information contained in this document about its accuracy, suitability for particular applications, or the results obtained or obtainable using the information. Some of the Information arises from laboratory work with small-scale equipment which may not provide a reliable indication of performance or properties obtained or obtainable on larger-scale equipment. Values reported as "typical" or stated without a range do not state minimum or maximum properties; consult your sales representative for property ranges and min/max specifications. Processing conditions can cause material properties to shift from the values stated in the Information. PolyOne makes no warranties or guarantees respecting suitability of either PolyOne's products or the Information for your process or end-use application. You have the responsibility to conduct full-scale end-product performance testing to determine suitability in your application, and you assume all risk and liability arising from your use of the Information and/or use or handling of any product. POLYONE MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, either with respect to the Information or products reflected by the Information. This data sheet shall NOT operate as permission, recommendation, or inducement to practice any patented invention without permission of the patent owner.