Avient Dynaflex™ G7690-9 (Black) Thermoplastic Elastomer (TPE)

Categories: Polymer; Thermoplastic; Elastomer, TPE

Material Notes: Dynaflex™ G7690-9 (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

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™ G7690-9 (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™ G7690-9 (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 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

Information provided by PolyOne

Vendors: No vendors are listed for this material. Please click here if you are a supplier and would like information on how to add your listing to this material.

Physical Properties	Metric	English	Comments
Specific Gravity	1.18 g/cc	1.18 g/cc	ASTM D792
Viscosity	14300 cP @Shear Rate 11200 1/s, Temperature 200 °C	14300 cP @Shear Rate 11200 1/s, Temperature 392 °F	ASTM D3835
	74000 cP @Shear Rate 1340 1/s, Temperature 200 °C	74000 cP @Shear Rate 1340 1/s, Temperature 392 °F	ASTM D3835
Linear Mold Shrinkage, Flow	0.0060 - 0.014 cm/cm	0.0060 - 0.014 in/in	ASTM D955
Melt Flow	14 g/10 min @Load 5.00 kg, Temperature 200 °C	14 g/10 min @Load 11.0 lb, Temperature 392 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	89	89	10 sec; ASTM D2240
Tensile Strength at Break	11.0 MPa @Temperature 23.0 °C	1600 psi @Temperature 73.4 °F	Die C2 hr; ASTM D412
Tensile Stress at Strain	4.55 MPa @Strain 100 %, Temperature 23.0 °C	660 psi @Strain 100 %, Temperature 73.4 °F	Die C2 hr; ASTM D412
	6.21 MPa @Strain 300 %, Temperature 23.0 °C	901 psi @Strain 300 %, Temperature 73.4 °F	Die C2 hr; ASTM D412
Elongation at Break	600 % @Temperature 23.0 °C	600 % @Temperature 73.4 °F	Die C2 hr; ASTM D412
Tear Strength	46.4 kN/m	265 pli	ASTM D624
Compression Set	38 % @Temperature 23.0 °C, Time 79200 sec	38 % @Temperature 73.4 °F, Time 22.0 hour	ASTM D395B

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	166 - 177 °C	331 - 351 °F	
Middle Barrel Temperature	177 - 193 °C	351 - 379 °F	
Front Barrel Temperature	188 - 227 °C	370 - 441 °F	
Nozzle Temperature	193 - 227 °C	379 - 441 °F	
Mold Temperature	15.6 - 37.8 °C	60.1 - 100 °F	
Back Pressure	0.000 - 0.827 MPa	0.000 - 120 psi	
Screw Speed	40 - 100 rpm	40 - 100 rpm	

Compliance Properties	Metric	English	Comments
FDA	Yes	Yes	21 CFR 177.1210

Descriptive Properties	
Appearance	Black
Features	General Purpose Good Flow Good Processability Good Processing Stability
Forms	Pellets
Generic Material	TPE
Generic Name	Thermoplastic Elastomer (TPE)
Processing Method	Injection Molding
Regional Availability	Asia Pacific
RoHS Compliance	RoHS Compliant

Suggested Max Regrind	20%
Uses	Consumer Applications
	Flexible Grips
	Gaskets
	General Purpose
	Overmolding
	Seals
	Sporting Goods

Some of the values displayed above may have been converted from their original units and/or rounded in order to display the information in a consistent format. Users requiring more precise data for scientific or engineering calculations can click on the property value to see the original value as well as raw conversions to equivalent units. We advise that you only use the original value or one of its raw conversions in your calculations to minimize rounding error. We also ask that you refer to MatWeb's terms of use regarding this information. Click here to view all the property values for this datasheet as they were originally entered into MatWeb.