

PolyOne Dynaflex™ G7640-1 (Natural) Thermoplastic Elastomer (TPE)

Category : Polymer , Thermoplastic , Elastomer, TPE

Material Notes:

Dynaflex™ G7640-1 (Natural) is an easy processing, general purpose TPE designed for a wide variety of applications, including those where FDA compliance is required. - Non-Slip Grip - Overmold Adhesion to Polypropylene - Soft Touch, Rubbery Feel Color concentrates with polypropylene (PP), ethylene vinyl acetate (EVA), or low density polyethylene (PE) carriers are most suitable for coloring Dynaflex™ G7640-1 (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™ G7640-1 (Natural) with minimal property losses, provided that the regrind is free of contamination. To minimize losses during molding, the melt temperature should be as low as possible. The final determination of regrind effectiveness should be determined by the customer. The Dynaflex™ G7640-1 (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: 175 to 800 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

Order this product through the following link:

http://www.lookpolymers.com/polymer_PolyOne-Dynaflex-G7640-1-Natural-Thermoplastic-Elastomer-TPE.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.18 g/cc	1.18 g/cc	ASTM D792
Viscosity	8800 cP	8800 cP	ASTM D3835
	@Shear Rate 11200 1/s, Temperature 200 °C	@Shear Rate 11200 1/s, Temperature 392 °F	
Linear Mold Shrinkage, Flow	0.013 - 0.021 cm/cm	0.013 - 0.021 in/in	ASTM D955
Melt Flow	3.0 g/10 min	3.0 g/10 min	ASTM D1238
	@Load 5.00 kg, Temperature 200 °C	@Load 11.0 lb, Temperature 392 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	40	40	10 sec; ASTM D2240
Tensile Strength at Break	3.38 MPa	490 psi	Die C2 hr; ASTM D412
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Stress	1.17 MPa	170 psi	Die C2 hr; ASTM D412
	@Strain 100 %, Temperature 23.0 °C	@Strain 100 %, Temperature 73.4 °F	

Mechanical Properties	2.48 MPa Metric	360 psi English	Comments
	@Strain 300 %, Temperature 23.0 °C	@Strain 300 %, Temperature 73.4 °F	Die C2 hr, ASTM D412
Elongation at Break	520 % @Temperature 23.0 °C	520 % @Temperature 73.4 °F	Die C2 hr, ASTM D412
Tear Strength	17.5 kN/m	99.9 pli	ASTM D624
Compression Set	11 % @Temperature 23.0 °C, Time 79200 sec	11 % @Temperature 73.4 °F, Time 22.0 hour	ASTM D395B

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	160 - 188 °C	320 - 370 °F	
Middle Barrel Temperature	177 - 193 °C	351 - 379 °F	
Front Barrel Temperature	182 - 210 °C	360 - 410 °F	
Nozzle Temperature	193 - 216 °C	379 - 421 °F	
Mold Temperature	15.6 - 37.8 °C	60.1 - 100 °F	
Back Pressure	0.000 - 0.689 MPa	0.000 - 99.9 psi	
Screw Speed	25 - 100 rpm	25 - 100 rpm	

Descriptive Properties	Value	Comments
Agency Ratings	FDA 21 CFR 177.1200	Please contact GLS Thermoplastic Elastomers for a copy of the FDA compliance letter.
Appearance	Natural Color	
Features	General Purpose	
	Good Colorability	
	Good Flow	
	Good Processability	
	Good Processing Stability	
Forms	Pellets	
Generic Material	TPE	
Generic Name	Thermoplastic Elastomer (TPE)	

Descriptive Properties	Value	Comments
Processing Method	Extrusion	
	Injection Molding	
Regional Availability	Asia Pacific	
RoHS Compliance	RoHS Compliant	
Suggested Max Regrind	20%	
Uses	Consumer Applications	
	Flexible Grips	
	Gaskets	
	General Purpose	
	Overmolding	
	Seals	
	Soft Touch Applications	
	Sporting Goods	

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