

PolyOne Dynaflex™ G7940-1 NSFG Thermoplastic Elastomer (TPE)

Category : Polymer , Thermoplastic , Elastomer, TPE

Material Notes:

Dynaflex™ G7940-1 NSFG is a NSF 51 (food equipment) approved material suitable for a wide variety of applications. -NSF 51 approved - FDA (see Notes) -Overmold Adhesion to Polypropylene -Soft Touch, Rubbery Feel Dynaflex™ G7940-1 NSFG 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. Color concentrates with polypropylene (PP), ethylene vinyl acetate (EVA), or low density polyethylene (PE) carriers are most suitable for coloring Dynaflex™ G7940-1 NSFG. 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™ G7940-1 NSFG 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™ G7940-1 NSFG 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-G7940-1-NSFG-Thermoplastic-Elastomer-TPE.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.18 g/cc	1.18 g/cc	ASTM D792
Viscosity	8800 cP @Shear Rate 11200 1/s, Temperature 200 °C	8800 cP @Shear Rate 11200 1/s, Temperature 392 °F	ASTM D3835
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 @Load 5.00 kg, Temperature 200 °C	3.0 g/10 min @Load 11.0 lb, Temperature 392 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	40	40	10 sec; ASTM D2240
Tensile Strength at Break	3.59 MPa @Temperature 23.0 °C	521 psi @Temperature 73.4 °F	Die C2 hr; ASTM D412

Mechanical Properties	1.24 MPa Metric	180 psi English	Comments
Tensile Stress	@Strain 100 %, Temperature 23.0 °C	@Strain 100 %, Temperature 73.4 °F	Die C2 hr; ASTM D412
	2.03 MPa	294 psi	Die C2 hr; ASTM D412
	@Strain 300 %, Temperature 23.0 °C	@Strain 300 %, Temperature 73.4 °F	
Elongation at Break	580 %	580 %	Die C2 hr; ASTM D412
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tear Strength	17.5 kN/m	99.9 pli	ASTM D624
Compression Set	12 %	12 %	ASTM D395B
	@Temperature 23.0 °C, Time 79200 sec	@Temperature 73.4 °F, Time 22.0 hour	

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 177.1210	Please contact GLS Thermoplastic Elastomers for a copy of the FDA compliance letter.
	NSF 51	
Appearance	Natural Color	
Features	Good Colorability	
	Good Flow	
	Good Processability	
	Good Processing Stability	
	Recyclable Material	

Forms Descriptive Properties	Pellets Value	Comments
Generic Material	TPE	
Generic Name	Thermoplastic Elastomer (TPE)	
Manufacturer / Supplier	GLS Thermoplastic Elastomers	
Processing Method	Injection Molding	
Regional Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
RoHS Compliance	RoHS Compliant	
Suggested Max Regrind	20%	
Uses	Consumer Applications	
	Flexible Grips	
	Food Service Applications	
	Gaskets	
	Household Goods	
	Kitchenware	
	Non-specific Food Applications	
	Overmolding	
	Seals	
	Soft Touch Applications	

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