# Dynalloy™ GP 7810-40T

#### Thermoplastic Elastomer

#### PolyOne Corporation

#### Message:

Dynalloy™GP 7810-40T is a thermoplastic elasticity mainly developed for the consumer goods market, such as kitchen utensils, toys, personal and infant care products, etc. This series is modified by hydrogenated styrene block copolymer as substrate.

General Information			
Agency Ratings	FDA Not Rated 2		
RoHS Compliance	RoHS compliance		
Appearance	Translucent		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.868	g/cm³	ASTM D792
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A, 10 sec)	39		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress (300% Strain, 23°C)	1.59	MPa	ASTM D412
Tensile Strength (Yield, 23°C)	5.55	MPa	ASTM D412
Tensile Elongation (Break, 23°C)	870	%	ASTM D412
Fill Analysis	Nominal Value	Unit	Test Method
Apparent Viscosity (200°C, 11200 sec^-1)	5.80	Pa·s	ASTM D3835
Injection	Nominal Value	Unit	
Suggested Max Regrind	20	%	
Rear Temperature	166 - 188	°C	
Middle Temperature	177 - 193	°C	
Front Temperature	188 - 227	°C	
Nozzle Temperature	182 - 216	°C	
Processing (Melt) Temp	193 - 227	°C	
Mold Temperature	16 - 38	°C	
Injection instructions			

Color concentrates with polypropylene (PP), ethylene vinyl acetate (EVA), or low density polyethylene (PE) carriers are most suitable for coloring Dynalloy™ GP 7810. 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 7810 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 7810 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

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