

PolyOne Dynalloy™ OBC8000-T40 Thermoplastic Elastomer (TPE)

Category : Polymer , Thermoplastic , Elastomer , TPE

Material Notes:

Dynalloy™ OBC8000-T40 is an easy processing, general processing TPE utilizing the unique rubber properties of Dow INFUSE™ Olefin Block Copolymers. Designed for a wide variety of applications, including applications requiring FDA compliances - Adhesion to Polypropylene - Enhanced Flow - Excellent Colorability - Warm, Non-tacky, Rubbery Color concentrates with polypropylene (PP), ethylene vinyl acetate (EVA), or low density polyethylene (LDPE) carriers are most suitable for coloring Dynalloy™ OBC8000-T40. 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. Liquid color can be used, but mineral oil based carriers may have a significant effect on the final hardness value.

Concentrates based on PVC should not be used. A high color match consistency can be obtained by using precolored compounds available from GLS. 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) polystyrene (PS) or polypropylene (PP). Regrind levels up to 20% can be used with Dynalloy™ OBC8000-T40 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. Dynalloy™ OBC8000-T40 has good 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: 200 to 900 psi 2nd Stage - Hold Pressure: 20% of Boost Hold Time (Thick Part): 4 to 10 sec Hold Time (Thin Part): 1 to 4 sec Information provided by PolyOne

Order this product through the following link:

http://www.lookpolymers.com/polymer_PolyOne-Dynalloy-OBC8000-T40-Thermoplastic-Elastomer-TPE.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.878 g/cc	0.878 g/cc	ASTM D792
Viscosity	8300 cP	8300 cP	ASTM D3835
	@Shear Rate 11200 1/s, Temperature 200 °C	@Shear Rate 11200 1/s, Temperature 392 °F	
	37000 cP	37000 cP	ASTM D3835
	@Shear Rate 1340 1/s, Temperature 200 °C	@Shear Rate 1340 1/s, Temperature 392 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	43	43	10 sec; ASTM D2240
Tensile Strength at Break	3.10 MPa	450 psi	Die C2 hr; ASTM D412
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Stress	1.05 MPa	152 psi	Die C2 hr; ASTM D412
	@Strain 100 %, Temperature 23.0 °C	@Strain 100 %, Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
	137 MPa	220 psi	
	@Strain 300 %, Temperature 23.0 °C	@Strain 300 %, Temperature 73.4 °F	Die C2 hr; ASTM D412
Elongation at Break	790 %	790 %	Die C2 hr; ASTM D412
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Compression Set	24 %	24 %	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	166 - 188 °C	331 - 370 °F	
Middle Barrel Temperature	177 - 199 °C	351 - 390 °F	
Front Barrel Temperature	199 - 221 °C	390 - 430 °F	
Nozzle Temperature	199 - 221 °C	390 - 430 °F	
Melt Temperature	193 - 227 °C	379 - 441 °F	
Mold Temperature	26.7 - 37.8 °C	80.1 - 100 °F	
Back Pressure	0.000 - 0.552 MPa	0.000 - 80.1 psi	
Screw Speed	50 - 100 rpm	50 - 100 rpm	

Descriptive Properties	Value	Comments
Agency Ratings	FDA Unspecified Rating	
Appearance	Translucent	
Features	Good Colorability	
	Good Flow	
Forms	Pellets	
Generic Material	TPE	
Generic Name	Thermoplastic Elastomer (TPE)	
Manufacturer / Supplier	GLS Thermoplastic Elastomers	
Processing Method	Extrusion	
	Injection Molding	

Regional Availability

Descriptive Properties	Africa & Middle East Value	Comments
	Asia Pacific	
	Europe	
	North America	
	South America	
RoHS Compliance	RoHS Compliant	
Suggested Max Regrind	20%	
Uses	Consumer Applications	
	Overmolding	
	Soft Touch Applications	
	Transparent or Translucent Parts	

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