Dynalloy™ OBC8000-T40

Thermoplastic Elastomer

Key Characteristics

Product Description

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

General		
Material Status	• Commercial: Active	
Regional Availability	• Africa & Middle East • Asia Pacific	• Latin America • North America
Features	• Good Colorability	• Good Flow
Uses	• Consumer Applications • Overmolding	• Soft Touch Applications • Transparent or Translucent Parts
Agency Ratings	• FDA	
RoHS Compliance	• RoHS Compliant	
Appearance	• Translucent	
Forms	• Pellets	
Processing Method	• Extrusion	• Injection Molding

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	0.880	0.880	ASTM D792
Molding Shrinkage - Flow			ASTM D955
73°F (23°C), Injection Molded	0.011 to 0.018 in/in	1.1 to 1.8 %	
Molding Shrinkage - Across Flow			ASTM D955
73°F (23°C), Injection Molded	0.011 to 0.018 in/in	1.1 to 1.8 %	
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [2, 3] (100% Strain, 73°F (23°C))	153 psi	1.05 MPa	ASTM D412
Tensile Stress [2, 3] (300% Strain, 73°F (23°C))	235 psi	1.62 MPa	ASTM D412
Tensile Strength [2, 3] (Break, 73°F (23°C))	450 psi	3.10 MPa	ASTM D412
Tensile Elongation [2, 3] (Break, 73°F (23°C))	790 %	790 %	ASTM D412
Compression Set (73°F (23°C), 22 hr)	24 %	24 %	ASTM D395B
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	42	42	ASTM D2240
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 1340 sec^-1	37.0 Pa·s	37.0 Pa·s	
392°F (200°C), 11200 sec^-1	8.30 Pa·s	8.30 Pa·s	

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Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Suggested Max Regrind	20 %	20 %
Rear Temperature	330 to 370 °F	166 to 188 °C
Middle Temperature	350 to 390 °F	177 to 199 °C
Front Temperature	390 to 430 °F	199 to 221 °C
Nozzle Temperature	390 to 430 °F	199 to 221 °C
Processing (Melt) Temp	380 to 440 °F	193 to 227 °C
Mold Temperature	80 to 100 °F	27 to 38 °C
Back Pressure	0.00 to 80.0 psi	0.00 to 0.552 MPa
Screw Speed	50 to 100 rpm	50 to 100 rpm

Injection Notes

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 tempetature 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

Notes

[1] Typical values are not to be construed as specifications.

[2] Die C

[3] 2 hr

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