

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 Unspecified Rating	
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	

Copyright © 2020 Avient Corporation. Avient makes no representations, guarantees, or warranties of any kind with respect to the Information contained in this document about its accuracy, suitability for particular applications, or the results obtained or obtainable using the information. Some of the Information arises from laboratory work with small-scale equipment which may not provide a reliable indication of performance or properties obtained or obtainable on larger-scale equipment. Values reported as "typical" or stated without a range do not state minimum or maximum properties; consult your sales representative for property ranges and min/max specifications. Processing conditions can cause material properties to shift from the values stated in the Information. Avient makes no warranties or guarantees respecting suitability of either Avient's products or the Information for your process or end-use application. You have the responsibility to conduct full-scale end-product performance testing to determine suitability in your application, and you assume all risk and liability arising from your use of the Information and/or use or handling of any product. Avient MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, either with respect to the Information or products reflected by the Information. This data sheet shall NOT operate as permission, recommendation, or inducement to practice any patented invention without permission of the patent owner.

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 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

Notes

¹ Typical values are not to be construed as specifications.

² Die C

³ 2 hr

CONTACT INFORMATION

North America

Avon Lake, United States
 33587 Walker Road
 Avon Lake, OH, United States ,
 44012
 +1 440 930 1000
 +1 844 4AVIENT

South America

Sao Paulo, Brazil
 Av. Francisco Nakasato, 1700
 13295-000 Itupeva
 Sao Paulo, Brazil
 +55 11 4593 9200

Asia

Shanghai, China
 2F, Block C
 200 Jinsu Road
 Pudong, 201206
 Shanghai, China
 +86 (0) 21 6028 4888

Europe

Pommerloch, Luxembourg
 19 Route de Bastogne
 Pommerloch, Luxembourg , L-9638
 +352 269 050 35



avient.com

Copyright ©, 2020 Avient Corporation. Avient makes no representations, guarantees, or warranties of any kind with respect to the Information contained in this document about its accuracy, suitability for particular applications, or the results obtained or obtainable using the information. Some of the Information arises from laboratory work with small-scale equipment which may not provide a reliable indication of performance or properties obtained or obtainable on larger-scale equipment. Values reported as "typical" or stated without a range do not state minimum or maximum properties; consult your sales representative for property ranges and min/max specifications. Processing conditions can cause material properties to shift from the values stated in the Information. Avient makes no warranties or guarantees respecting suitability of either Avient's products or the Information for your process or end-use application. You have the responsibility to conduct full-scale end-product performance testing to determine suitability in your application, and you assume all risk and liability arising from your use of the Information and/or use or handling of any product. Avient MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, either with respect to the Information or products reflected by the Information. This data sheet shall NOT operate as permission, recommendation, or inducement to practice any patented invention without permission of the patent owner.