

PolyOne Dynalloy™ OBC8000-T05 Thermoplastic Elastomer (TPE)

Category : Polymer , Thermoplastic , Elastomer , TPE

Material Notes:

Dynalloy™ OBC8000-T05 is an ultra-soft TPE utilizing the unique rubber properties of Dows INFUSE™ Olefin Block Copolymers. This product is designed for injection molding applications where exceptional softness and overmolding to polypropylene is desired New Product.

Commercial specifications have not been established. - Adhesion to Polypropylene - Enhanced Flow - Excellent Colorability - Tactile Feel - Ultra SoftColor concentrates with Dynalloy™ OBC8000-T05 as the carrier are most suitable for coloring this product. If a OBC8000-T05 color concentrate carrier is desired, it is important that the chosen color house have underwater pelletization capabilities. Typical loadings for color concentrates are 1% to 5% by weight. Liquid color (pigment, not dye) can be used; white oil carriers are recommended. A high color match consistency can be obtained by using precolored compounds available from GLS. Polypropylene (PP) based color concentrates are not recommended because they lead to poor dispersion and can significantly change the hardness of the material. 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) polystyrene (PS) or polypropylene (PP). Regrind levels up to 20% can be used with Dynalloy™ OBC8000-T05 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-T05 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: 0.5 to 3 in/sec 1st Stage - Boost Pressure: 200 to 700 psi 2nd Stage - Hold Pressure: 20% of Boost Hold Time (Thick Part): 1 to 5 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-Dynalloy-OBC8000-T05-Thermoplastic-Elastomer-TPE.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.868 g/cc	0.868 g/cc	ASTM D792
Viscosity	7600 cP	7600 cP	ASTM D3835
	@Shear Rate 11200 1/s, Temperature 200 °C	@Shear Rate 11200 1/s, Temperature 392 °F	
	40000 cP	40000 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 OO	57	57	10 sec; ASTM D2240
Tensile Strength at Break	1.25 MPa	181 psi	Die C2 hr; ASTM D412
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.103 MPa	14.9 psi	

Tensile Stress Mechanical Properties	Metric @Strain 100 %, Temperature 23.0 °C	English @Strain 100 %, Temperature 73.4 °F	Die C2 hr; ASTM D412 Comments
	0.207 MPa	30.0 psi	Die C2 hr; ASTM D412
	@Strain 300 %, Temperature 23.0 °C	@Strain 300 %, Temperature 73.4 °F	
Elongation at Break	1400 %	1400 %	Die C2 hr; ASTM D412
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Compression Set	10 %	10 %	ASTM D395B
	@Temperature 23.0 °C, Time 79200 sec	@Temperature 73.4 °F, Time 22.0 hour	
	19 %	19 %	ASTM D395B
	@Temperature 40.0 °C, Time 79200 sec	@Temperature 104 °F, Time 22.0 hour	
	35 %	35 %	ASTM D395B
	@Temperature 70.0 °C, Time 79200 sec	@Temperature 158 °F, Time 22.0 hour	

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	149 - 171 °C	300 - 340 °F	
Middle Barrel Temperature	166 - 188 °C	331 - 370 °F	
Front Barrel Temperature	177 - 199 °C	351 - 390 °F	
Nozzle Temperature	182 - 216 °C	360 - 421 °F	
Melt Temperature	182 - 216 °C	360 - 421 °F	
Mold Temperature	15.6 - 32.2 °C	60.1 - 90.0 °F	
Back Pressure	0.000 - 0.552 MPa	0.000 - 80.1 psi	
Screw Speed	80 - 120 rpm	80 - 120 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.
Appearance	Translucent	
Features	Good Colorability	
	Good Flow	
	Good Processing Stability	

Descriptive Properties	Value Low Hardness	Comments
	Soft	
Forms	Pellets	
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	
	Overmolding	
	Personal Care	
	Seals	
	Transparent or Translucent Parts	

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