

PolyOne Dynalloy™ OBC 8100-N50 Thermoplastic Elastomer (TPE)

Category : Polymer , Thermoplastic , Elastomer , TPE

Material Notes:

Dynalloy™ OBC8100-N50 is a TPE developed utilizing the unique rubber properties of Dow INFUSE™ Olefin Block Copolymers. The 8100 Series has been specifically developed for applications requiring the TPE to be in direct contact with food. New Product. Commercial specifications have not been established. - Adhesion to Polypropylene, Low Density Polyethylene - Direct Food Contact - Enhanced Flow Properties - Excellent Colorability Color concentrates with polypropylene (PP), ethylene vinyl acetate (EVA), or low density polyethylene (PE) carriers are most suitable for coloring Dynalloy™ OBC 8100-N50. 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). The Dynalloy™ OBC 8100-N50 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 Injection Speed: 1 to 3 in/sec 1st Stage - Boost Pressure: 175 to 800 psi 2nd Stage - Hold Pressure: 30% of Boost Hold Time (Thick Part): 3 to 10 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-OBC-8100-N50-Thermoplastic-Elastomer-TPE.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.06 g/cc	1.06 g/cc	ASTM D792
Viscosity	22900 cP	22900 cP	ASTM D3835
	@Shear Rate 11200 1/s, Temperature 200 °C	@Shear Rate 11200 1/s, Temperature 392 °F	
	112000 cP	112000 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	48	48	10 sec; ASTM D2240
Tensile Strength at Break	3.31 MPa	480 psi	Die C2 hr; ASTM D412
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Stress	1.48 MPa	215 psi	Die C2 hr; ASTM D412
	@Strain 100 %, Temperature 23.0 °C	@Strain 100 %, Temperature 73.4 °F	
	1.90 MPa	276 psi	Die C2 hr; ASTM D412
	@Strain 300 %,	@Strain 300 %,	

Mechanical Properties	Temperature 23.0 °C Metric	Temperature 73.4 °F English	Comments
Elongation at Break	990 % @Temperature 23.0 °C	990 % @Temperature 73.4 °F	Die C2 hr; ASTM D412
Tear Strength	17.5 kN/m	99.9 pli	ASTM D624

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	160 - 188 °C	320 - 370 °F	
Middle Barrel Temperature	177 - 193 °C	351 - 379 °F	
Front Barrel Temperature	182 - 210 °C	360 - 410 °F	
Nozzle Temperature	193 - 216 °C	379 - 421 °F	
Mold Temperature	15.6 - 26.7 °C	60.1 - 80.1 °F	
Back Pressure	0.000 - 0.689 MPa	0.000 - 99.9 psi	
Screw Speed	25 - 100 rpm	25 - 100 rpm	

Descriptive Properties	Value	Comments
Agency Ratings	BfR Food Contact, Unspecified Rating	Please contact GLS Thermoplastic Elastomers for a copy of the BfR compliance letter.
	EU 2002/72/EC	Please contact GLS Thermoplastic Elastomers for a copy of the EU compliance letter.
	FDA 21 CFR 177.2600	Please contact GLS Thermoplastic Elastomers for a copy of the FDA compliance letter.
Appearance	Natural Color	
Features	Food Contact Acceptable	
	Good Colorability	
	Good Flow	
Forms	Pellets	
Generic Material	TPE	
Generic Name	Thermoplastic Elastomer (TPE)	
Manufacturer / Supplier	GLS Thermoplastic Elastomers	
Processing Method	Injection Molding	
Regional	Africa & Middle East	

Availability Descriptive Properties	Value	Comments
	Asia Pacific	
	Europe	
	North America	
	South America	
RoHS Compliance	RoHS Compliant	
Uses	Food Service Applications	
	Household Goods	
	Kitchenware	
	Non-specific Food Applications	
	Overmolding	
	Soft Touch Applications	

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