

PolyOne OnFlex™ BIO 5170D-E0010 Thermoplastic Elastomer (TPE)

Category : Polymer , Renewable/Recycled Polymer , Thermoplastic , Elastomer, TPE

Material Notes:

OnFlex™ BIO 5100 series thermoplastic elastomer compounds are glass reinforced thermoplastic polyurethane compounds made from renewable natural sources. These compounds contain at least 20% renewable material as certified according to ASTM-D6866. The OnFlex™ BIO 5100 series compounds are formulated to provide excellent toughness, abrasion resistance and mechanical properties. Properties are measured using injection molded plaques. Information provided by PolyOne

Order this product through the following link:

http://www.lookpolymers.com/polymer_PolyOne-OnFlex-BIO-5170D-E0010-Thermoplastic-Elastomer-TPE.php

Physical Properties	Metric	English	Comments
Density	1.34 g/cc	0.0484 lb/in ³	ISO 1183
Filler Content	20 %	20 %	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	70	70	ISO 868
Tensile Strength at Break	65.0 MPa	9430 psi	ISO 527-2
Elongation at Break	15 %	15 %	ISO 527-2
Tensile Modulus	1.20 GPa	174 ksi	ISO 527-2
Flexural Strength	40.0 MPa	5800 psi	ISO 178
Flexural Modulus	1.10 GPa	160 ksi	ISO 178
Charpy Impact Unnotched	3.00 J/cm ²	14.3 ft-lb/in ²	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	NB	NB	ISO 179
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.600 J/cm ²	2.86 ft-lb/in ²	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	3.50 J/cm ²	16.7 ft-lb/in ²	ISO 179
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Processing Properties	Metric	English	Comments
Melt Temperature	225 - 250 °C	437 - 482 °F	
Mold Temperature	30.0 - 60.0 °C	86.0 - 140 °F	

Processing Properties	Metric	English	Comments
Drying Temperature	100 - 120 °C	212 - 248 °F	
Dry Time	1.00 - 2.00 hour	1.00 - 2.00 hour	

Descriptive Properties	Value	Comments
Biobased Content	34%	ASTM D6866
Features	Good Abrasion Resistance	
	Good Toughness	
	Renewable Resource Content	
Forms	Pellets	
Generic Material	TPE	
Generic Name	Thermoplastic Elastomer (TPE)	
Injection Rate	Slow	
Manufacturer / Supplier	GLS Thermoplastic Elastomers	
Processing Method	Injection Molding	
	Multi Injection Molding	
Regional Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
RoHS Compliance	RoHS Compliant	
Uses	Automotive Applications	
	Consumer Applications	
	General Purpose	
	Sporting Goods	

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