

DuPont Performance Polymers Rynite® 545 BK504 PET (Unverified Data**)

Category : Polymer , Thermoplastic , Polyester, TP , Polyethylene Terephthalate (PET) , Polyethylene Terephthalate (PET), 50% Glass Reinforced

Material Notes:

Rynite® 545 BK504 is a 45% glass reinforced modified polyethylene terephthalate with good strength and stiffness, excellent dimensional stability and creep resistance. Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Rynite-545-BK504-PET-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.70 g/cc	0.0614 lb/in³	ISO 1183
Filler Content	45 %	45 %	
Linear Mold Shrinkage, Flow	0.0020 cm/cm @Thickness 2.00 mm	0.0020 in/in @Thickness 0.0787 in	ISO 294-4, Similar
Linear Mold Shrinkage, Transverse	0.0080 cm/cm @Thickness 2.00 mm	0.0080 in/in @Thickness 0.0787 in	ISO 294-4, Similar

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	175 MPa @Temperature 23.0 °C	25400 psi @Temperature 73.4 °F	ISO 527
Elongation at Break	1.9 % @Temperature 23.0 °C	1.9 % @Temperature 73.4 °F	ISO 527
Tensile Modulus	15.5 GPa @Temperature 23.0 °C	2250 ksi @Temperature 73.4 °F	ISO 527
Flexural Modulus	14.0 GPa @Temperature 23.0 °C	2030 ksi @Temperature 73.4 °F	ISO 178
Charpy Impact Unnotched	6.00 J/cm² @Temperature 23.0 °C	28.6 ft-lb/in² @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	1.10 J/cm² @Temperature 23.0 °C	5.23 ft-lb/in² @Temperature 73.4 °F	ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	500 µm/m-°C @Temperature -40.0 - 23.0 °C	278 µin/in-°F @Temperature -40.0 - 73.4 °F	ISO 11359-1/-2

Thermal Properties	Metric 500 µm/m-°C	English 278 µin/in-°F	Comments
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	ISO 11359-1/-2
	500 µm/m-°C	278 µin/in-°F	
	@Temperature 55.0 - 160 °C	@Temperature 131 - 320 °F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	67.0 µm/m-°C	37.2 µin/in-°F	
	@Temperature -40.0 - 23.0 °C	@Temperature -40.0 - 73.4 °F	ISO 11359-1/-2
	89.0 µm/m-°C	49.4 µin/in-°F	
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	ISO 11359-1/-2
	121 µm/m-°C	67.2 µin/in-°F	
	@Temperature 55.0 - 160 °C	@Temperature 131 - 320 °F	ISO 11359-1/-2
Melting Point	249 °C	480 °F	10°C/min; ISO 11357-1/-3
Deflection Temperature at 1.8 MPa (264 psi)	230 °C	446 °F	ISO 75-1/-2
UL RTI, Electrical	140 °C	284 °F	
	@Thickness 0.810 mm	@Thickness 0.0319 in	UL 746B
	140 °C	284 °F	
	@Thickness 1.50 mm	@Thickness 0.0591 in	UL 746B
	140 °C	284 °F	
	@Thickness 3.00 mm	@Thickness 0.118 in	UL 746B
UL RTI, Mechanical with Impact	140 °C	284 °F	
	@Thickness 1.50 mm	@Thickness 0.0591 in	UL 746B
	140 °C	284 °F	
	@Thickness 3.00 mm	@Thickness 0.118 in	UL 746B
	140 °C	284 °F	
	@Thickness 0.810 mm	@Thickness 0.0319 in	UL 746B
UL RTI, Mechanical without Impact	140 °C	284 °F	
	@Thickness 1.50 mm	@Thickness 0.0591 in	UL 746B
	140 °C	284 °F	
	@Thickness 3.00 mm	@Thickness 0.118 in	UL 746B

Thermal Properties	Metric	English	Comments
Flammability, UL94	@Thickness 0.810 mm	@Thickness 0.0319 in	UL 746B
	HB	HB	IEC 60695-11-10
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	HB	HB	IEC 60695-11-10
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	IEC 60695-11-10
	@Thickness 3.00 mm	@Thickness 0.118 in	
	HB	HB	UL94
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	HB	HB	UL94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	UL94
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Comparative Tracking Index	>= 200 V	>= 200 V	UL 746A
	@Thickness 3.00 mm, Temperature 23.0 °C	@Thickness 0.118 in, Temperature 73.4 °F	

Processing Properties	Metric	English	Comments
Melt Temperature	285 °C	545 °F	Optimum
	280 - 300 °C	536 - 572 °F	
Mold Temperature	>= 95.0 °C	>= 203 °F	
	110 °C	230 °F	optimum
Drying Temperature	120 °C	248 °F	
Dry Time	4.00 hour	4.00 hour	
Moisture Content	<= 0.020 %	<= 0.020 %	

Descriptive Properties	Value	Comments
Appearance	Black Color	
Drying Recommended	Yes	

Descriptive Properties	Value	Comments
Features	Creep Resistance, Good	
	Dimensional Stability, Good	
	Electrical Properties, Good	
	Stiffness, Good	
	Strength, Good	
	Thermal Aging Resistance, Good	
Filler	Glass fiber reinforcement	
Forms	Pellets	
Generic	PET	
Material Status	Current	
Part Marking Code	>PET-GF45<	ISO 11469
Polymer Family	Polyester	
Polymer Type	PET	
Processing Method	Injection Molding	
Product Category	Glass Reinforced Resins	
Region Available - Global	Yes	
Resin Identification	PET-GF45	ISO 1043
RoHS Compliance	Contact Manufacturer	
Uses	Automotive Applications	
	Electrical/Electronic Applications	
	Housings	
	Phenolic Replacement	
	Structural Parts	

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