

BASF Petra® 230 BK-112 22/13% Glass/Mineral Filled PET

Category : Polymer , Thermoplastic , Polyester, TP , Polyethylene Terephthalate (PET) , Polyethylene Terephthalate (PET), Glass/Mineral Reinforced

Material Notes:

Petra 230 BK-112 is a 35% mineral and glass fiber reinforced, black pigmented, polyethylene terephthalate injection molding compound. It exhibits a very good combination of performance properties including high strength and stiffness with ductility at elevated temperatures, good chemical resistance, dimensional stability and warp resistance.

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Petra-230-BK-112-2213-GlassMineral-Filled-PET.php

Physical Properties	Metric	English	Comments
Density	1.424 g/cc	0.05145 lb/in ³	Melt; ISO 1183
	1.61 g/cc	0.0582 lb/in ³	ISO 1183
Viscosity Measurement	0.55	0.55	Inherent Viscosity
Linear Mold Shrinkage	0.0030 cm/cm	0.0030 in/in	ASTM Data; MD

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	118	118	ASTM Test
Tensile Strength at Break	115 MPa	16700 psi	0.2 in/min; ASTM Test
	45.0 MPa @Temperature 120 °C	6530 psi @Temperature 248 °F	ISO Data
	45.0 MPa @Temperature 120 °C	6530 psi @Temperature 248 °F	ASTM Test
	60.0 MPa @Temperature 80.0 °C	8700 psi @Temperature 176 °F	ASTM Test
	60.0 MPa @Temperature 80.0 °C	8700 psi @Temperature 176 °F	ISO Data
	145 MPa @Temperature -40.0 °C	21000 psi @Temperature -40.0 °F	ASTM Test
	145 MPa @Temperature -40.0 °C	21000 psi @Temperature -40.0 °F	ISO Data
	Tensile Strength, Ultimate	115 MPa	16700 psi
Elongation at Break	2.0 %	2.0 %	0.2 in/min; ASTM Test

Mechanical Properties	Metric SI UNITS	English SI UNITS	Comments 5mm/min, ISO 527
	1.6 %	1.6 %	ISO Data
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	1.6 %	1.6 %	ASTM Test
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	6.3 %	6.3 %	ASTM Test
	@Temperature 80.0 °C	@Temperature 176 °F	
	6.3 %	6.3 %	ISO Data
	@Temperature 80.0 °C	@Temperature 176 °F	
	8.1 %	8.1 %	ISO Data
	@Temperature 120 °C	@Temperature 248 °F	
	8.1 %	8.1 %	ASTM Test
	@Temperature 120 °C	@Temperature 248 °F	
Tensile Modulus	11.7 GPa	1700 ksi	1mm/min; ISO 527
	2.59 GPa	376 ksi	ISO Data
	@Temperature 120 °C	@Temperature 248 °F	
	4.12 GPa	598 ksi	ISO Data
	@Temperature 80.0 °C	@Temperature 176 °F	
	12.27 GPa	1780 ksi	ISO Data
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Flexural Strength	180 MPa	26100 psi	ASTM Test
Flexural Modulus	8.76 GPa	1270 ksi	ISO Data
	9.05 GPa	1310 ksi	ASTM Test
Izod Impact, Notched	0.550 J/cm	1.03 ft-lb/in	ASTM Test
	@Thickness 3.17 mm	@Thickness 0.125 in	
Izod Impact, Notched (ISO)	6.00 kJ/m ²	2.86 ft-lb/in ²	ISO Test
Charpy Impact, Notched	0.600 J/cm ²	2.86 ft-lb/in ²	ISO 179
	0.550 J/cm ²	2.62 ft-lb/in ²	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	22.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	12.2 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ASTM Test
	@Temperature -30.0 - 30.0 $^{\circ}\text{C}$	@Temperature -22.0 - 86.0 $^{\circ}\text{F}$	
Specific Heat Capacity	1.906 J/g- $^{\circ}\text{C}$	0.4555 BTU/lb- $^{\circ}\text{F}$	Melt
Thermal Conductivity	0.306 W/m-K	2.12 BTU-in/hr-ft ² - $^{\circ}\text{F}$	Melt
Melting Point	245 $^{\circ}\text{C}$	473 $^{\circ}\text{F}$	10 K/min
	245 $^{\circ}\text{C}$	473 $^{\circ}\text{F}$	ASTM Test
Deflection Temperature at 0.46 MPa (66 psi)	240 $^{\circ}\text{C}$	464 $^{\circ}\text{F}$	ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	206 $^{\circ}\text{C}$	403 $^{\circ}\text{F}$	ASTM Test
	210 $^{\circ}\text{C}$	410 $^{\circ}\text{F}$	ISO 75

Processing Properties	Metric	English	Comments
Melt Temperature	275 $^{\circ}\text{C}$	527 $^{\circ}\text{F}$	Injection molding
Mold Temperature	115 $^{\circ}\text{C}$	239 $^{\circ}\text{F}$	Injection molding
Injection Velocity	115 mm/sec	4.53 in/sec	Injection molding

Descriptive Properties	Value	Comments
Color	BK-112	
Commercial Status	Active America	
Form	Pellets	
Impact Modified	No	
Primary Processing Technique	Injection Molding	
Processing	Injection Molding	

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