



Petra® 230 BK112

BASF Corporation - Polyethylene Terephthalate

Tuesday, November 5, 2019

General Information

Product Description

Petra 230 BK112 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.

Applications

Petra 230 BK112 is generally recommended for applications such as automotive door lock components, housings, gears and electrical and mechanical components.

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• North America	
Filler / Reinforcement	• Glass\Mineral, 35% Filler by Weight		
Features	• Chemical Resistant • Good Dimensional Stability	• High Stiffness • High Strength	• Warp Resistant
Uses	• Automotive Applications • Electrical Parts	• Gears • Housings	• Machine/Mechanical Parts
Automotive Specifications	• CHRYSLER MS-DB-400 CPN3425 Color: Black • DELPHI PMS TP-6 MG 22803 • FORD WSF-M4D779-A • GM APOPS #800-01 • GM APOPS #800-03	• GM APOPS #800-04 • GM APOPS #800-07 • GM APOPS #800-08 • GM APOPS #800-09 • GM APOPS #800-10	• GM APOPS #800-11 • GM APOPS #800-12 • GM APOPS #800-13 • GM APOPS #800-15
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.61		ASTM D792
Density	1.61	g/cm ³	ISO 1183
Molding Shrinkage - Flow (0.125 in)	3.0E-3	in/in	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			ISO 527-2
-40°F	1.78E+6	psi	
73°F	1.70E+6	psi	
176°F	598000	psi	
248°F	376000	psi	
302°F	365000	psi	
Tensile Strength			ASTM D638
Break, -40°F	21000	psi	
Break, 73°F	16700	psi	
Break, 176°F	8700	psi	
Break, 250°F	6530	psi	

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Mechanical	Nominal Value	Unit	Test Method
Tensile Stress			ISO 527-2
Break, -40°F	21000	psi	
Break, 73°F	16700	psi	
Break, 176°F	8700	psi	
Break, 248°F	6530	psi	
Break, 302°F	5800	psi	
Tensile Elongation			ASTM D638
Break, -40°F	1.6	%	
Break, 73°F	2.0	%	
Break, 176°F	6.3	%	
Break, 250°F	8.1	%	
Tensile Strain			ISO 527-2
Break, -40°F	1.6	%	
Break, 73°F	2.0	%	
Break, 176°F	6.3	%	
Break, 248°F	8.1	%	
Break, 302°F	6.5	%	
Flexural Modulus (73°F)	1.31E+6	psi	ASTM D790
Flexural Modulus (73°F)	1.27E+6	psi	ISO 178
Flexural Strength (73°F)	26100	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179
-22°F	2.6	ft·lb/in ²	
73°F	2.9	ft·lb/in ²	
Notched Izod Impact (73°F)	1.0	ft·lb/in	ASTM D256
Notched Izod Impact Strength (73°F)	2.9	ft·lb/in ²	ISO 180
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	118		ASTM D785
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (66 psi, Unannealed)	464	°F	ISO 75-2/B
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed	403	°F	
Heat Deflection Temperature (264 psi, Unannealed)	410	°F	ISO 75-2/A
Peak Melting Temperature	473	°F	ASTM D3418
Melting Temperature (DSC)	473	°F	ISO 3146
CLTE - Flow	1.2E-5	in/in/°F	ASTM E831

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	248	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.020	%
Processing (Melt) Temp	536 to 590	°F
Mold Temperature	212 to 230	°F
Injection Pressure	508 to 1810	psi
Injection Rate	Fast	

Notes

¹ Typical properties: these are not to be construed as specifications.