Petra® 230 BK112

Polyethylene Terephthalate (PET)

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.

PHYSICAL	ISO Test Method	Property Value
Density, g/cm³	1183	1.61
MECHANICAL	**ISO Test Method**	**Property Value**
Tensile Modulus, MPa	527	
-40°C		12,270
23°C		11,700
80°C		4,120
120°C		2,590
150°C		2,520
Tensile stress at break, MPa	527	
-40°C		145
23°C		115
80°C		60
120°C		45
150°C		40
Tensile strain at break, %	527	
-40°C		1.6

23°C		2.0
80°C		6.3
120°C		8.1
150°C		6.5
Flexural Modulus, MPa	178	
23°C		8,760

IMPACT	ISO Test Method	Property Value
Izod Notched Impact, kJ/m^2	180	
23°C		6
Charpy Notched, kJ/m^2	179	
-30°C		5.5
23°C		6

THERMAL	ISO Test Method	Property Value
Melting Point, °C	3146	245
HDT A, ° C	75	210
HDT B, ° C	75	240

Processing Guidelines

Material Handling
Max. Water content: 0.02%
To ensure optimum part performance, this product must be dried prior to molding and maintained at a moisture level of less than 0.02%, with a preferred moisture target of less than 0.015%. A dehumidifying hopper dryer mounted on the molding machine and equipped with alternating desiccant beds and air temperature/dew point indicators is recommended. Drying time is 2 - 4 hours at 120°C (248°F). Further information concerning safe handling procedures can be obtained from the Safety Data Sheet. Alternatively, please contact your BASF representative.

Typical Profile
Melt Temperature 280-310°C (536-590°F)
Mold Temperature 100-110°C (212-230°F)
Injection and Packing Pressure 35-125 bar (500-1500 psi)

Mold Temperatures
This product can be processed over mold temperatures of 80-120°C (176-248°F); however, for optimizing surface appearance, dimensional stability and part performance, mold surface temperatures of 100-110°C (212-230°F) are preferred.

Pressures
Injection pressure controls the filling of the part and should be applied for 90% of ram travel. Packing pressure affects the final part and can be used effectively in controlling sink marks and shrinkage. It should be applied and maintained until the gate area is completely frozen off.

Back pressure can be utilized to provide uniform melt consistency and reduce trapped air and gas. Minimal back pressure should

be utilized to prevent glass breakage.

Fill Rate
Fast fill rates are recommended to ensure uniform melt delivery to the cavity and prevent premature freezing. Surface appearance is directly affected by injection rate.

Note

BASF Corporation

Engineering Plastics
1609 Biddle Avenue
Wyandotte, MI 48192

General Information

800-BC-RESIN

Technical Assistance

800-527-TECH (734-324-5150)

Web address

http://www.plasticsportal.com/usa