

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/cm ³	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/m²	180	
23°C		6
Charpy Notched, kJ/m²	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

Although all statements and information in this publication are believed to be accurate and reliable, they are presented gratis and for guidance only, and risks and liability for results obtained by use of the products or application of the suggestions described are assumed by the user. NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH. Statements or suggestions concerning possible use of the products are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent. The user should not assume that toxicity data and safety measures are indicated or that other measures may not be required.

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>