

Product Information

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Petra® 330 FR **Polyethylene Terephthalate (PET)**


Product Description

Petra 330 FR is a 30% glass reinforced, flame retardant PET, injection molding compound rated UL94 V-0 in a 1/64 inch thickness. The product is designed for injection molding of thin and complex parts such as electrical bobbins. Due to its high crystallization rate the processability of the product in the injection molding process is very good. It exhibits excellent balance of properties including strength, stiffness, HDT, dimensional resistance and electrical properties.

Applications

Electrical/electronic application including connectors, bobbins, sockets, ciol, switches, relays, covers and housings.

PHYSICAL	ISO Test Method	Property Value
Density, g/cm ³	1183	1.67
MECHANICAL	ISO Test Method	Property Value
Tensile stress at break, MPa	527	
23C		135
Tensile strain at break, %	527	
23C		2.0
THERMAL	ISO Test Method	Property Value
Melting Point, C	3146	250
ELECTRICAL	ISO Test Method	Property Value
Comparative Tracking Index	IEC 60112	260
Volume Resistivity (Ohm-m)	IEC 60093	>1E13
Dielectric Constant (100 Hz)	IEC 60250	3.7
Dielectric Constant (1 MHz)	IEC 60250	3.9
Dissipation Factor (100 Hz), E-4	IEC 60250	200
Dissipation Factor (1 MHz), E-4	IEC 60250	100
Dielectric Strength, KV/mm	IEC 60243-1	34

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 120C (248F). Further information concerning safe handling procedures can be obtained from the Safety Data Sheet. Alternatively, please contact your BASF representative.

Typical Profile

Melt Temperature 280-300C (536-572F)

Mold Temperature 100-110C (212-230F)

Injection and Packing Pressure 35-125 bar (500-1500 psi)

Mold Temperatures

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>

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This product can be processed over mold temperatures of 80-120C (176-248F); however, for optimizing surface appearance, dimensional stability and part performance, mold surface temperatures of 100-110C (212-230F) 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. recommended to minimize glass fiber 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

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