Product Information

Petra® 130
PET (Polyethylene Terephthalate)

BASF
The Chemical Company

Product Description

Petra 130 is a 30% glass fiber reinforced polyethylene terephthalate injection molding compound. It is available in natural and pigmented versions. It exhibits a superb combination of performance properties including high strength and stiffness at elevated temperatures with good chemical resistance and dimensional stability.

Applications

Petra 130 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	1183	1.55
MECHANICAL	**ISO Test Method**	**Property Value**
Tensile Modulus, MPa	527	
-40C		10,400
23C		10,200
80C		4,950
121C		2,940
Tensile stress at break, MPa	527	
-40C		210
23C		155
80C		80
121C		65
Tensile strain at break, %	527	
23C		3.5
IMPACT	**ISO Test Method**	**Property Value**
Charpy Notched, kJ/m^2	179	
23C		9
THERMAL	**ISO Test Method**	**Property Value**
Melting Point, C	3146	245
HDT A, C	75	210
HDT B, C	75	240
ELECTRICAL	**ISO Test Method**	**Property Value**
Volume Resistivity	IEC 60093	>1E13
Dielectric Constant (100 Hz)	IEC 60250	3.7
Dielectric Constant (1 MHz)	IEC 60250	3.5
Dissipation Factor (100 Hz)	IEC 60250	200
Dissipation Factor (1 MHz)	IEC 60250	200
Dielectric Strength, KV/mm	IEC 60243-1	40
UL RATINGS	**UL Test Method**	**Property Value**
Flammability Rating, 1.5mm	UL94	HB
Relative Temperature Index, 1.5mm	UL746B	
Mechanical w/o Impact, C		140

Mechanical w/ Impact, C	140
Electrical, C	140

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

Typical Profile
Melt Temperature 280-300 degC (536-572 degF)
Mold Temperature 100-110 degC (212-230 degF)
Injection and Packing Pressure 35-125 bar (500-1500 psi)

Mold Temperatures
This product can be processed over mold temperatures of 80-120 degC; however, for optimizing surface appearance, dimensional stability and part performance, mold surface temperatures of 100-110 degC (212-230 degF) 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.