Product Information

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Ultradur® B 4300 G6 BK05110

PBT (Polybutylene Terephthalate)

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Product Description

Ultradur B 4300 G6 BK05110 is an easy flowing, pigmented black, injection molding PBT with 30% glass fiber reinforcement for rigid, tough, and dimensionally stable parts.

Applications

Typical applications include windshield wiper arms, printed circuit boards, housings, consoles, contact carriers, and covers.

PHYSICAL	ISO Test Method	Property Value
Density, g/cm³	1183	1.53
Viscosity Number, cm³/g	1628	104
Moisture, %	62	
(24 Hour)		0.2
(50% RH)		0.2
(Saturation)		0.4
MECHANICAL	**ISO Test Method**	**Property Value**
Tensile Modulus, MPa	527	
23°C		9,800
Tensile stress at break, MPa	527	
23°C		136
Tensile strain at break, %	527	
23°C		2.6
Flexural Modulus, MPa	178	
23°C		8,800
IMPACT	**ISO Test Method**	**Property Value**
Izod Notched Impact, kJ/m^2	180	
23°C		11
Charpy Notched, kJ/m^2	179	
23°C		9
Charpy Unnotched, kJ/m^2	179	
23°C		62
THERMAL	**ISO Test Method**	**Property Value**
Melting Point, °C	3146	223
HDT A, ° C	75	207
ELECTRICAL	**ISO Test Method**	**Property Value**
Volume Resistivity (Ohm)	IEC 60093	>1E13
Surface Resistivity (Ohm-m)	IEC 60093	1E13

Processing Guidelines

Material Handling
Max. Water content: 0.04%
To ensure optimum part performance, this product must be dried prior to molding and maintained at a moisture level of less than 0.04%. Dehumidifying or desiccant dryers operating at 100-120 degC (212-248 degF) for 4 hours drying time are recommended. Further information concerning safe handling procedures can be obtained from the Safety Data Sheet. Alternatively, please contact your BASF representative.

Typical Profile
Melt Temperature 250-270 degC (482-518 degF)
Mold Temperature 60-100 degC (140-212 degF)
Injection and Packing Pressure 35-125 bar (500-1500 psi)

Mold Temperatures
This product can be processed over mold temperatures of 60-100 degC (140-212 degF); however, for optimizing surface appearance, dimensional stability and part performance, mold surface temperatures of at least 80 degC (176 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. A maximum of 10 bar (145 psi) is recommended due to the risk of excessive shear.

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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