Product Information

Aug 2017

Ultradur® B 4040 G10 BK05110
Polybutylene Terephthalate/Polyethylene Terephthalate

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Product Description

Ultradur B 4040 G10 BK05110 is a pigmented black, injection molding PBT+PET with 50% glass fiber reinforced for technical parts with excellent surface finish.

Applications

Typical applications include automotive exterior, door handles, exterior mirror housings, rear screen, wiper arms.

PHYSICAL	ISO Test Method	Property Value
Density, g/cm³	1183	1.73
Viscosity Number, cm³/g	1628	97
Moisture, %	62	
(50% RH)		0.12
(Saturation)		0.4
RHEOLOGICAL	**ISO Test Method**	**Property Value**
Melt Volume Rate (275 C/2.16 Kg), cc/10min.	1133	6
MECHANICAL	**ISO Test Method**	**Property Value**
Tensile Modulus, MPa	527	
23C		16,500
Tensile stress at break, MPa	527	
23C		155
Tensile strain at break, %	527	
23C		1.5
Flexural Strength, MPa	178	
23C		225
Flexural Modulus, MPa	178	
23C		15,000
IMPACT	**ISO Test Method**	**Property Value**
Izod Notched Impact, kJ/m²	180	
-40C		8.1
23C		8.2
Charpy Notched, kJ/m²	179	
-30C		8.5
23C		10
Charpy Unnotched, kJ/m²	179	
-30C		69
23C		52
THERMAL	**ISO Test Method**	**Property Value**
Melting Point, C	3146	223
HDT A, C	75	205
HDT B, C	75	221
Coef. of Linear Thermal Expansion, Parallel, mm/mm C		0.25 X10-4

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

ELECTRICAL	ISO Test Method	Property Value
Volume Resistivity (Ohm-m)	IEC 60093	>1E13
Surface Resistivity (Ohm)	IEC 60093	1E13
Dielectric Constant (100 Hz)	IEC 60250	4
Dielectric Constant (1 MHz)	IEC 60250	4
Dissipation Factor (100 Hz), E-4	IEC 60250	12
Dissipation Factor (1 MHz), E-4	IEC 60250	150

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 100-120C (212-248F) 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 250-270C (482-518F)
Mold Temperature 60-100C (140-212F)
Injection and Packing Pressure 35-125 bar (500-1500 psi)

Mold Temperatures
This product can be processed over mold temperatures of 60-100C (140-212F); however, for optimizing surface appearance, dimensional stability and part performance, mold surface temperatures of at least 80C (176F) 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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