**Product Information** 

Aug 2017

Ultradur<sup>®</sup> B 4040 G10 BK05110 Polybutylene Terephthalate/Polyethylene Terephthalate



# **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.

PHYSICALISO Test MethodProperty ValueDensity, g/cm³11831.73Viscosity Number, cm³/g162897Moisture, %62(50% RH)0.12(50% RH)0.120.4(Saturation)0.4Property ValueMelt Volume Rate (275 C/2.16 Kg), cc/10min.11336MECHANICALISO Test MethodProperty ValueTensile Modulus, MPa52716,50023C1655155Tensile stress at break, MPa52715523C155155Tensile strein at break, %5271.523C1.51.5Flexural Strength, MPa17823C23C225225Flexural Modulus, MPa178
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23C 225 Flexural Modulus, MPa 178
Flexural Modulus, MPa 178
23C 15,000
IMPACT ISO Test Method Property Value
Izod Notched Impact, kJ/m <sup>2</sup> 180
-40C 8.1
23C 8.2
Charpy Notched, kJ/m <sup>2</sup> 179
-30C 8.5
23C 10
Charpy Unnotched, kJ/m <sup>2</sup> 179
-30C 69
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,0.25 X10-4mm/mm C0.25 X10-4

# Ultradur® B 4040 G10 BK05110



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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