

# **Ultradur® B 4300 G3 LS High Speed BK15045** **Polybutylene Terephthalate (PBT)**



## Product Description

Ultradur B 4300 G3 LS High Speed BK15045 is a high flow, fast cycling with low warpage, 15% glass filled, pigmented black, injection molding PBT for industrial parts, rigid tough and dimensional stable applications. This grade is suitable for laser marking.

PHYSICAL	ISO Test Method	Property Value
Density, g/cm <sup>3</sup>	1183	1.41
Moisture, %	62	
(50% RH)		0.2
(Saturation)		0.4
MECHANICAL	ISO Test Method	Property Value
Tensile Modulus, MPa	527	
23C		5,500
Tensile stress at break, MPa	527	
23C		99
Tensile strain at break, %	527	
23C		3.6
Flexural Modulus, MPa	178	
23C		5,200
IMPACT	ISO Test Method	Property Value
Izod Notched Impact, kJ/m <sup>2</sup>	180	
23C		4.6
Charpy Notched, kJ/m <sup>2</sup>	179	
23C		4.7
Charpy Unnotched, kJ/m <sup>2</sup>	179	
23C		27
THERMAL	ISO Test Method	Property Value
Melting Point, C	3146	223
HDT A, C	75	189

## 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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