Product Information

Oct 2019

Ultradur® B 4300 G6 FC Aqua
Polybutylene Terephthalate (PBT)

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Product Description

Ultradur B 4300 G6 FC Aqua is a easy flowing injection molding food and drinking water contact PBT with 30% glass fiber reinforcement for rigid, tough, and dimensionally stable parts.

PHYSICAL	ISO Test Method	Property Value
Density, g/cm³	1183	1.53
Viscosity Number, cm³/g	1628	102
Mold Shrinkage, parallel, %	294-4	0.34
Mold Shrinkage, normal, %	294-4	1.07
Moisture, %	62	
(50% RH)		0.2
(Saturation)		0.4
RHEOLOGICAL	**ISO Test Method**	**Property Value**
Melt Volume Rate (250 C/2.16 Kg), cc/10min.	1133	11
MECHANICAL	**ISO Test Method**	**Property Value**
Tensile Modulus, MPa	527	
23C		9,800
Tensile stress at break, MPa	527	
23C		140
Tensile strain at break, %	527	
23C		3.0
Flexural Strength, MPa	178	
23C		200
IMPACT	**ISO Test Method**	**Property Value**
Charpy Notched, kJ/m²	179	
23C		9.5
Charpy Unnotched, kJ/m²	179	
-30C		74
23C		70
THERMAL	**ISO Test Method**	**Property Value**
Melting Point, C	3146	223
HDT A, C	75	215
HDT B, C	75	220
Coef. of Linear Thermal Expansion, Parallel, mm/mm C		0.25 X10-4
ELECTRICAL	**ISO Test Method**	**Property Value**
Comparative Tracking Index	IEC 60112	375
Volume Resistivity (Ohm-m)	IEC 60093	1E14
Surface Resistivity (Ohm)	IEC 60093	1E13
Dielectric Constant (100 Hz)	IEC 60250	4
Dielectric Constant (1 MHz)	IEC 60250	3.8
Dissipation Factor (100 Hz), E-4	IEC 60250	25
Dissipation Factor (1 MHz), E-4	IEC 60250	170

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General Information: 800-BC-RESIN
Technical Assistance: 800-527-TECH (734-324-5150)
Web address: http://www.plasticsportal.com/usa

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 prCedures 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 prCessed 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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