

Ultradur[®] B 4300 G4 FC

PBT (Polybutylene Terephthalate)

Product Description

Ultradur B 4300 G4 FC is a easy flowing injection molding food contact PBT with 20% glass fiber reinforcement for rigid, tough, and dimensionally stable parts.

PHYSICAL	ISO Test Method	Property Value
Density, g/cm ³	1183	1.45
Viscosity Number, cm ³ /g	1628	107
Mold Shrinkage, parallel, %	294-4	0.43
Mold Shrinkage, normal, %	294-4	1.16
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	14
MECHANICAL	ISO Test Method	Property Value
Tensile Modulus, MPa	527	
23°C		7,000
Tensile stress at break, MPa	527	
23°C		115
Tensile strain at break, %	527	
23°C		3.5
Flexural Strength, MPa	178	
23°C		170
IMPACT	ISO Test Method	Property Value
Charpy Notched, kJ/m ²	179	
23°C		6
Charpy Unnotched, kJ/m ²	179	
-30°C		54
23°C		58
THERMAL	ISO Test Method	Property Value
Melting Point, °C	3146	223
HDT A, ° C	75	205
HDT B, ° C	75	220
Coef. of Linear Thermal Expansion, Parallel, mm/mm °C		0.35 X10 ⁻⁴
ELECTRICAL	ISO Test Method	Property Value
Comparative Tracking Index	IEC 60112	300
Volume Resistivity (Ohm)	IEC 60093	1E14
Surface Resistivity (Ohm-m)	IEC 60093	1E13
Dielectric Constant (100 Hz)	IEC 60250	3.7
Dielectric Constant (1 MHz)	IEC 60250	3.7
Dissipation Factor (100 Hz)	IEC 60250	12
Dissipation Factor (1 MHz)	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 100-120°C (212-248°F) 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°C (482-518°F)

Mold Temperature 60-100°C (140-212°F)

Injection and Packing Pressure 35-125 bar (500-1500 psi)

Mold Temperatures

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

Although all statements and information in this publication are believed to be accurate and reliable, they are presented gratis and for guidance only, and risks and liability for results obtained by use of the products or application of the suggestions described are assumed by the user. NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH. Statements or suggestions concerning possible use of the products are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent. The user should not assume that toxicity data and safety measures are indicated or that other measures may not be required.

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>

