Ultradur® B 4300 G6 FC Aqua

BASF Corporation - Polybutylene Terephthalate

Monday, November 4, 2019

General Information

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.

General

Material Status	• Commercial: Active		
Availability	• North America		
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight		
Features	• Drinking Water Contact Acceptable • Food Contact Acceptable	• Good Dimensional Stability • Good Flow	• Good Rigidity • Good Toughness
Agency Ratings	• EC 1907/2006 (REACH)		
RoHS Compliance	• RoHS Compliant		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.53	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	11	cm³/10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.1	%	
Flow	0.34	%	
Water Absorption (Saturation, 73°F)	0.40	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.20	%	ISO 62
Viscosity Number (Reduced Viscosity)	102.0	ml/g	ISO 1628
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus (73°F)	1.42E+6	psi	ISO 527-2
Tensile Stress (Break, 73°F)	20300	psi	ISO 527-2
Tensile Strain (Break, 73°F)	3.0	%	ISO 527-2
Flexural Stress (73°F)	29000	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (73°F)	4.5	ft·lb/in²	ISO 179
Charpy Unnotched Impact Strength			ISO 179
-22°F	35	ft·lb/in²	
73°F	33	ft·lb/in²	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (66 psi, Unannealed)	428	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	419	°F	ISO 75-2/A
Melting Temperature (DSC)	433	°F	ISO 3146
CLTE - Flow	1.4E-5	in/in/°F	

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Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+13	ohms	IEC 60093
Volume Resistivity	1.0E+16	ohms·cm	IEC 60093
Dielectric Constant			IEC 60250
100 Hz	4.00		
1 MHz	3.80		
Dissipation Factor			IEC 60250
100 Hz	2.5E-3		
1 MHz	0.017		
Comparative Tracking Index	375	V	IEC 60112

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	212 to 248	°F
Drying Time	4.0	hr
Suggested Max Moisture	0.040	%
Processing (Melt) Temp	482 to 518	°F
Mold Temperature	140 to 212	°F
Injection Pressure	500 to 1500	psi
Injection Rate	Fast	
Back Pressure	< 145	psi

Notes

[1] Typical properties: these are not to be construed as specifications.