



Ultradur® B 4300 G3

BASF Corporation - Polybutylene Terephthalate

Monday, November 4, 2019

General Information

Product Description

Ultradur B 4300 G3 is an easy flowing injection molding PBT with 15% glass fiber reinforcement for rigid, tough, and dimensionally stable parts.

Applications

Typical applications include timer dials, toggles, knobs, parts for thermostats, oven-door handles, toaster housings and grills.

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • North America
Filler / Reinforcement	• Glass Fiber, 15% Filler by Weight
Features	• Good Dimensional Stability • Good Rigidity • Good Flow • Good Toughness
Uses	• Electrical Parts • Housings • Handles • Knobs
Agency Ratings	• EC 1907/2006 (REACH)
RoHS Compliance	• RoHS Compliant
Automotive Specifications	• GM GMP.PBT.006 Color: Natural • GM GMW16733P-PBT-GF15 Color: Natural
Forms	• Pellets
Processing Method	• Injection Molding

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.42		ASTM D792
Density	1.42	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	22	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (0.125 in)	5.0E-3	in/in	
Water Absorption (Saturation)	0.40	%	ASTM D570
Water Absorption (Saturation, 73°F)	0.40	%	ISO 62
Water Absorption (Equilibrium, 50% RH)	0.20	%	ASTM D570
Water Absorption (Equilibrium, 73°F, 50% RH)	0.20	%	ISO 62
Viscosity Number (Reduced Viscosity)	111.0	ml/g	ISO 1628
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73°F)	870000	psi	ISO 527-2
Tensile Strength (Break, 73°F)	13500	psi	ASTM D638
Tensile Stress (Break, 73°F)	13500	psi	ISO 527-2
Tensile Elongation (Break, 73°F)	4.0	%	ASTM D638
Tensile Strain (Break, 73°F)	4.0	%	ISO 527-2
Flexural Modulus (73°F)	701000	psi	ASTM D790
Flexural Modulus (73°F)	696000	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-40°F	0.81	ft-lb/in	
73°F	0.99	ft-lb/in	

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Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength (73°F)	2.8	ft-lb/in ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	428	°F	ASTM D648
Heat Deflection Temperature (66 psi, Unannealed)	428	°F	ISO 75-2/B
Deflection Temperature Under Load 264 psi, Unannealed	397	°F	ASTM D648
Heat Deflection Temperature (264 psi, Unannealed)	361	°F	ISO 75-2/A
Peak Melting Temperature	433	°F	ASTM D3418
Melting Temperature (DSC)	433	°F	ISO 3146
CLTE - Flow	2.2E-5	in/in/°F	
RTI Elec			UL 746
0.030 in	266	°F	
0.06 in	266	°F	
0.12 in	266	°F	
RTI Imp			UL 746
0.06 in	221	°F	
0.12 in	221	°F	
RTI Str (0.12 in)	284	°F	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity (0.0591 in)	1.0E+13	ohms	ASTM D257
Surface Resistivity	1.0E+13	ohms	IEC 60093
Volume Resistivity (0.0591 in)	> 1.0E+15	ohms·cm	ASTM D257
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Dielectric Constant			IEC 60250
100 Hz	3.70		
1 MHz	3.70		
Dissipation Factor			IEC 60250
100 Hz	1.2E-3		
1 MHz	0.015		
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.030 in	HB		
0.06 in	HB		
0.12 in	HB		

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	508 to 1810	psi
Injection Rate	Fast	
Back Pressure	< 145	psi

Notes

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