

Ultradur® B 4300 G2

Polybutylene Terephthalate

BASF Corporation

Message:

Ultradur B 4300 G2 is an easy flowing injection molding PBT with 10% 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 Information			
UL YellowCard	E41871-233776	E36632-531667	
Filler / Reinforcement	Glass Fiber,10% Filler by Weight		
Features	Good Dimensional Stability		
	Good Flow		
	Good Toughness		
	High Rigidity		
Uses	Electrical/Electronic Applications		
	Handles		
	Housings		
	Knobs		
Agency Ratings	EC 1907/2006 (REACH)		
RoHS Compliance	RoHS Compliant		
Forms	Pellets		
Processing Method	Injection Molding		
Multi-Point Data	Creep Modulus vs. Time (ISO 11403-1)		
	Isochronous Stress vs. Strain (ISO 11403-1)		
	Isothermal Stress vs. Strain (ISO 11403-1)		
	Secant Modulus vs. Strain (ISO 11403-1)		
	Viscosity vs. Shear Rate (ISO 11403-2)		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.37	g/cm ³	ASTM D792, ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	16.0	cm ³ /10min	ISO 1133
Molding Shrinkage			
Flow : 3.18 mm	0.80	%	
Across Flow	1.4	%	ISO 294-4
Flow	1.2	%	ISO 294-4
Water Absorption			
Saturation	0.40	%	ASTM D570

Saturation, 23°C	0.40	%	ISO 62
Equilibrium, 50% RH	0.20	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.20	%	ISO 62
Viscosity Number (Reduced Viscosity)	115.0	ml/g	ISO 1628
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	4500	MPa	ISO 527-2
Tensile Strength			
Break, 23°C	90.0	MPa	ASTM D638, ISO 527-2
Break, -40°C	111	MPa	ISO 527-2
Tensile Elongation (Break, 23°C)	3.5	%	ASTM D638, ISO 527-2
Flexural Modulus			
23°C	3930	MPa	ASTM D790
23°C	3900	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	5.0	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength			ISO 179
-30°C	38	kJ/m ²	
23°C	40	kJ/m ²	
Notched Izod Impact			
23°C	48	J/m	ASTM D256
23°C	5.0	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed	220	°C	ASTM D648, ISO 75-2/B
1.8 MPa, Unannealed	200	°C	ASTM D648, ISO 75-2/A
Peak Melting Temperature	223	°C	ASTM D3418, ISO 3146
CLTE - Flow	4.5E-5	cm/cm/°C	
RTI Elec			UL 746
0.750 mm	130	°C	
1.50 mm	130	°C	
3.00 mm	130	°C	
RTI Imp			UL 746
0.750 mm	125	°C	
1.50 mm	125	°C	
3.00 mm	125	°C	
RTI Str			UL 746
0.750 mm	125	°C	
1.50 mm	125	°C	
3.00 mm	140	°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity ¹	1.0E+13	ohms	ASTM D257, IEC 60093
Volume Resistivity			

1.50 mm	> 1.0E+13	ohms·cm	ASTM D257
--	> 1.0E+13	ohms·cm	IEC 60093
Dielectric Constant			IEC 60250
100 Hz	3.60		
1 MHz	3.60		
Dissipation Factor			IEC 60250
100 Hz	1.2E-3		
1 MHz	0.015		
Comparative Tracking Index	300	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.50 mm	HB		
3.00 mm	HB		
Injection	Nominal Value	Unit	
Drying Temperature	100 to 120	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.040	%	
Processing (Melt) Temp	250 to 270	°C	
Mold Temperature	60.0 to 100	°C	
Injection Pressure	3.50 to 12.5	MPa	
Injection Rate	Fast		
Back Pressure	< 1.00	MPa	
NOTE			
1.	1.5 mm		

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