

Ultradur® B 4300 G4

Polybutylene Terephthalate

BASF Corporation

Message:

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

Applications

Typical applications include car door handles, housings for small electric motors, headlight retainers and drum controllers.

General Information			
UL YellowCard	E36632-101287333	E41871-233777	
Filler / Reinforcement	Glass Fiber,20% Filler by Weight		
Features	Good Dimensional Stability		
	Good Flow		
	Good Toughness		
	High Rigidity		
Uses	Automotive Applications		
	Electric Motor Housings		
	Handles		
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	1.45	g/cm ³	ASTM D792, ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	14.0	cm ³ /10min	ISO 1133
Molding Shrinkage			
Flow : 3.18 mm	0.30	%	
Across Flow	1.2	%	ISO 294-4
Flow	0.43	%	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)	109.0	ml/g	ISO 1628
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	7100	MPa	ISO 527-2
Tensile Strength			
Break, 23°C	120	MPa	ASTM D638, ISO 527-2
Break, -40°C	173	MPa	ISO 527-2
Tensile Elongation (Break, 23°C)	3.0	%	ASTM D638, ISO 527-2
Flexural Modulus			
23°C	6140	MPa	ASTM D790
23°C	6300	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	8.0	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength			ISO 179
-30°C	54	kJ/m ²	
23°C	58	kJ/m ²	
Notched Izod Impact (23°C)	64	J/m	ASTM D256
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	205	°C	ASTM D648, ISO 75-2/A
Peak Melting Temperature	223	°C	ASTM D3418, ISO 3146
CLTE - Flow	3.5E-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	130	°C	
1.50 mm	130	°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	3.70		
1 MHz	3.70		
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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