Ultradur® B 4300 G10

Polybutylene Terephthalate

BASF Corporation

Message:

Injection molding grade with 50 % glass fibers for very rigid technical parts (eg PCBs and small motor housings).

General Information		
UL YellowCard	E41871-233775	E36632-101288610
Filler / Reinforcement	Glass Fiber,50% Filler by Weight	
Features	High Rigidity	
Uses	Electric Motor Housings Engineering Parts Printed Circuit Boards	
Agency Ratings	EC 1907/2006 (REACH)	
RoHS Compliance	RoHS Compliant	
Appearance	Black Colors Available Natural Color	
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) Shear Modulus vs. Temperature (ISO 11403-1) Viscosity vs. Shear Rate (ISO 11403-2)	
Resin ID (ISO 1043)	PBT-GF50	

Physical	Nominal Value	Unit	Test Method
Density	1.73	g/cm³	ISO 1183
Apparent Density	0.70 to 0.80	g/cm³	
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	3.50	cm³/10min	ISO 1133
Water Absorption			ISO 62
Saturation, 23°C	0.40	%	
Equilibrium, 23°C, 50% RH	0.20	%	
Viscosity Number [1]	97.0	cm³/g	ISO 307
Mold Shrinkage [2]			

free, longitudinal	0.20	%	
free, transverse	0.90	%	
Maximum Service Temperature - short cycle operation	210	°C	
Temperature Index - at 50% loss of tensile strength			IEC 60216
-- [3]	140	°C	
-- [4]	160	°C	
Flammability by Electrical Sources of Ignition - Method BH (4.00 mm)	BH2		IEC 60707
Automotive Materials (> 1.00 mm)	Passed		FMVSS 302
Screw Speed	< 250	mm/sec	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Ball Indentation Hardness (H 961/30)	220	MPa	ISO 2039-1
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	16500	MPa	ISO 527-2
Tensile Stress (Break)	160	MPa	ISO 527-2
Tensile Strain (Break)	1.7	%	ISO 527-2
Flexural Modulus	15000	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (23°C)	11	kJ/m^2	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	70	kJ/m^2	
23°C	60	kJ/m^2	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature			
0.45 MPa, Unannealed	220	°C	ISO 75-2/B
1.8 MPa, Unannealed	215	°C	ISO 75-2/A
Melting Temperature	223	°C	ISO 11357-3
CLTE - Flow (23 to 80°C)	2.0E-5 to 3.0E-5	cm/cm/°C	ISO 11359-2
Specific Heat	950	J/kg/°C	
Thermal Conductivity	0.36	W/m/K	DIN 52612
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	1.0E+13	ohms	IEC 60093
Volume Resistivity	1.0E+16	ohms·cm	IEC 60093
Relative Permittivity			IEC 60250
100 Hz	4.00		
1 MHz	4.00		
Dissipation Factor			IEC 60250
100 Hz	1.2E-3		
1 MHz	0.015		
Comparative Tracking Index			IEC 60112
Solution A	425	V	

Solution B	125	V	
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flammability Classification			IEC 60695-11-10, -20
0.400 mm	HB		
1.60 mm	HB		
Injection	**Nominal Value**	**Unit**	
Drying Temperature	80.0 to 120	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.040	%	
Hopper Temperature	80.0	°C	
Rear Temperature	260	°C	
Middle Temperature	265	°C	
Front Temperature	270	°C	
Nozzle Temperature	270	°C	
Processing (Melt) Temp	260 to 275	°C	
Mold Temperature	80.0 to 120	°C	
NOTE			
1.	solution 0,005 g/ml Phenole/1,2 Dichlorbenzol 1:1		
2.	plate with film gate 150*150*3 mm^3		
3.	20000 h		
4.	5000 h		

Recommended distributors for this material

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