

Ultradur® B 4406 G2

Polybutylene Terephthalate

BASF Corporation

Message:

Injection molding grade with 10 % glass fibers for parts requiring enhanced fire resistance (eg relay housings, coil formers, switches, lighting components, plug-and-socket connectors).

General Information			
UL YellowCard	E36632-531669	E41871-233786	E36632-101116598
Filler / Reinforcement	Glass Fiber,10% Filler by Weight		
Features	Flame Retardant		
Uses	Connectors		
	Housings		
	Lighting Applications		
	Switches		
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	Isothermal Stress vs. Strain (ISO 11403-1)		
	Secant Modulus vs. Strain (ISO 11403-1)		
	Viscosity vs. Shear Rate (ISO 11403-2)		
Resin ID (ISO 1043)	PBT FR (17)		
Physical	Nominal Value	Unit	Test Method
Density	1.52	g/cm³	ISO 1183
Apparent Density	0.70 to 0.80	g/cm³	
Melt Volume-Flow Rate (MVR) (275°C/2.16 kg)	15.0	cm³/10min	ISO 1133
Water Absorption			ISO 62
Saturation, 23°C	0.40	%	
Equilibrium, 23°C, 50% RH	0.20	%	
Viscosity Number ¹	120	cm³/g	ISO 307
Mold Shrinkage ²			
free, longitudinal	0.60	%	
free, transverse	1.3	%	

Maximum Service Temperature - short cycle operation	210	°C	
Temperature Index - at 50% loss of tensile strength			IEC 60216
-- 3	120	°C	
-- 4	130	°C	
Flammability by Electrical Sources of Ignition - Method BH (4.00 mm)	BH2		IEC 60707
Automotive Materials (> 1.00 mm)	Passed		FMVSS 302
ISO Type	PBT, MFGHLNR, 11-060, GF10		ISO 7792
Screw Speed	< 250	mm/sec	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	5500	MPa	ISO 527-2
Tensile Stress (Break)	95.0	MPa	ISO 527-2
Tensile Strain (Break)	3.3	%	ISO 527-2
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	5.0	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	40	kJ/m ²	
23°C	40	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	215	°C	ISO 75-2/B
1.8 MPa, Unannealed	190	°C	ISO 75-2/A
Melting Temperature	223	°C	ISO 11357-3
CLTE - Flow (23 to 80°C)	5.0E-5	cm/cm/°C	ISO 11359-2
Specific Heat	1600	J/kg/°C	
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	3.50		
1 MHz	3.50		
Dissipation Factor			IEC 60250
100 Hz	8.0E-3		
1 MHz	0.015		
Comparative Tracking Index			IEC 60112
Solution A	225	V	
Solution B	150	V	
Flammability	Nominal Value	Unit	Test Method
Flammability Classification			IEC 60695-11-10, -20
0.400 mm	V-0		
1.60 mm	V-0		

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	240	°C
Middle Temperature	245	°C
Front Temperature	250	°C
Nozzle Temperature	250	°C
Processing (Melt) Temp	250 to 275	°C
Mold Temperature	60.0 to 100	°C

NOTE

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|----|--|
| 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 |

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