

Ultradur® B 4406 G4

Polybutylene Terephthalate

BASF Corporation

Message:

Ultradur B 4406 G4 is an injection molding grade with 20 % glass fibers for parts requiring enhanced fire resistance (eg relay housings, plug-and-socket connectors, switches, lighting components).

Applications

Typical applications include relay housings, plug-and-socket connectors, switches, and lighting components.

General Information			
UL YellowCard	E36632-100378527	E36632-531670	E41871-233788
	E41871-233789		
Filler / Reinforcement	Glass Fiber,20% Filler by Weight		
Features	Flame Retardant		
Uses	Connectors		
	Housings		
	Lighting Fixtures		
	Switches		
Agency Ratings	EC 1907/2006 (REACH)		
RoHS Compliance	RoHS Compliant		
Forms	Pellets		
Processing Method	Injection Molding		
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1)		
	Secant Modulus vs. Strain (ISO 11403-1)		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.55	g/cm³	ASTM D792, ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	11.0	cm³/10min	ISO 1133
Molding Shrinkage - Flow (3.18 mm)	0.30	%	
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)	112.0	ml/g	ISO 1628
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	8200	MPa	ISO 527-2
Tensile Strength			
Break, 23°C	117	MPa	ASTM D638

Break, 23°C	125	MPa	ISO 527-2
Tensile Elongation			
Break, 23°C	2.2	%	ASTM D638
Break, 23°C	2.6	%	ISO 527-2
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	9.0	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	48	kJ/m ²	ISO 179
Notched Izod Impact (23°C)	53	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed	215	°C	ASTM D648
0.45 MPa, Unannealed	223	°C	ISO 75-2/B
1.8 MPa, Unannealed	177	°C	ASTM D648
1.8 MPa, Unannealed	200	°C	ISO 75-2/A
Peak Melting Temperature	223	°C	ASTM D3418, ISO 3146
CLTE - Flow			
--	3.0E-5	cm/cm/°C	ASTM E831
--	5.0E-5	cm/cm/°C	
RTI Elec			UL 746
0.750 mm	140	°C	
1.50 mm	140	°C	
3.00 mm	140	°C	
RTI Imp			UL 746
0.750 mm	120	°C	
1.50 mm	120	°C	
3.00 mm	120	°C	
RTI Str			UL 746
0.750 mm	125	°C	
1.50 mm	130	°C	
3.00 mm	130	°C	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity			
1.50 mm	> 1.0E+15	ohms · cm	ASTM D257
--	> 1.0E+15	ohms · cm	IEC 60093
Dielectric Constant			IEC 60250
100 Hz	3.90		
1 MHz	3.60		
Dissipation Factor			IEC 60250
100 Hz	7.0E-3		
1 MHz	0.017		
Comparative Tracking Index	200	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method

Flame Rating		UL 94
0.400 mm	V-0	
0.750 mm	V-0	
1.50 mm	V-0	
3.00 mm	V-0	
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

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