



Ultradur® B 4300 G2

BASF Corporation - Polybutylene Terephthalate

Monday, November 4, 2019

General Information

Product Description

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

Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • North America
Filler / Reinforcement	• Glass Fiber, 10% Filler by Weight
Features	• Good Dimensional Stability • Good Rigidity • Good Flow • Good Toughness
Uses	• Electrical/Electronic Applications • Housings • Handles • Knobs
Agency Ratings	• EC 1907/2006 (REACH)
RoHS Compliance	• RoHS Compliant
Automotive Specifications	• CHRYSLER MS-DB-400 CPN3939 Color: Non-matched Color • CHRYSLER MS-DB-469 • FORD WSK-M4D749-A • GM QK 000477 Type A Color: Natural • GM QK 006611 R Color: Natural
Forms	• Pellets
Processing Method	• Injection Molding

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.37		ASTM D792
Density	1.37	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	16	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (0.125 in)	8.0E-3	in/in	
Molding Shrinkage			ISO 294-4
Across Flow	1.4	%	
Flow	1.2	%	
Water Absorption (Saturation)	0.40	%	ASTM D570
Water Absorption (Saturation, 73°F)	0.40	%	ISO 62
Water Absorption (Equilibrium, 50% RH)	0.20	%	ASTM D570
Water Absorption (Equilibrium, 73°F, 50% RH)	0.20	%	ISO 62
Viscosity Number (Reduced Viscosity)	115.0	ml/g	ISO 1628
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73°F)	653000	psi	ISO 527-2
Tensile Strength (Break, 73°F)	13100	psi	ASTM D638
Tensile Stress			ISO 527-2
Break, -40°F	16100	psi	
Break, 73°F	13100	psi	
Tensile Elongation (Break, 73°F)	3.5	%	ASTM D638

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Mechanical	Nominal Value	Unit	Test Method
Tensile Strain			ISO 527-2
Break, -40°F	2.8	%	
Break, 73°F	3.5	%	
Flexural Modulus (73°F)	570000	psi	ASTM D790
Flexural Modulus (73°F)	566000	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	2.4	ft·lb/in ²	ISO 179
Charpy Unnotched Impact Strength			ISO 179
-22°F	18	ft·lb/in ²	
73°F	19	ft·lb/in ²	
Notched Izod Impact (73°F)	0.90	ft·lb/in	ASTM D256
Notched Izod Impact Strength (73°F)	2.4	ft·lb/in ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	428	°F	ASTM D648
Heat Deflection Temperature (66 psi, Unannealed)	428	°F	ISO 75-2/B
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed	392	°F	
Heat Deflection Temperature (264 psi, Unannealed)	392	°F	ISO 75-2/A
Peak Melting Temperature	433	°F	ASTM D3418
Melting Temperature (DSC)	433	°F	ISO 3146
CLTE - Flow	2.5E-5	in/in/°F	
RTI Elec			UL 746
0.030 in	266	°F	
0.06 in	266	°F	
0.12 in	266	°F	
RTI Imp			UL 746
0.030 in	257	°F	
0.06 in	257	°F	
0.12 in	257	°F	
RTI Str			UL 746
0.030 in	257	°F	
0.06 in	257	°F	
0.12 in	284	°F	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity (0.0591 in)	1.0E+13	ohms	ASTM D257
Surface Resistivity	1.0E+13	ohms	IEC 60093
Volume Resistivity (0.0591 in)	> 1.0E+15	ohms·cm	ASTM D257
Volume Resistivity	> 1.0E+15	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

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Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.030 in		HB	
0.06 in		HB	
0.12 in		HB	

Processing Information			
Injection	Nominal Value	Unit	
Drying Temperature	212 to 248	°F	
Drying Time	4.0	hr	
Suggested Max Moisture	0.040	%	
Processing (Melt) Temp	482 to 518	°F	
Mold Temperature	140 to 212	°F	
Injection Pressure	508 to 1810	psi	
Injection Rate	Fast		
Back Pressure	< 145	psi	

Notes

¹ Typical properties: these are not to be construed as specifications.