Ultradur® B 4300 G4

BASF Corporation - Polybutylene Terephthalate

Monday, November 4, 2019

General Information

Product Description

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			
Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Filler / Reinforcement	• Glass Fiber, 20% Filler by Weight		
Features	• Good Dimensional Stability • Good Flow	• Good Rigidity • Good Toughness	
Uses	• Automotive Applications	• Electric Motor Housings	• Handles
Agency Ratings	• EC 1907/2006 (REACH)		
RoHS Compliance	• RoHS Compliant		
Automotive Specifications	• FORD WSK-M4D727-A • FORD WSK-M4D727-A Color: Black • FORD WSK-M4D727-A Color: Natural	• FORD WSK-M4D753-A2 • GM GMW16733P-PBT-GF20 • GM QK 000524 Type A Color: Natural	• GM QK 006613 R Color: Natural • IMDS ID 26070252 Color: Natural • PSA Peugeot-Citroën SPA X62 4137
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.45		ASTM D792
Density	1.45	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	14	cm³/10min	ISO 1133
Molding Shrinkage - Flow (0.125 in)	4.0E-3	in/in	
Molding Shrinkage			ISO 294-4
Across Flow	1.2	%	
Flow	0.43	%	
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)	109.0	ml/g	ISO 1628
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus (73°F)	1.03E+6	psi	ISO 527-2
Tensile Strength (Break, 73°F)	17400	psi	ASTM D638
Tensile Stress			ISO 527-2
Break, -40°F	25100	psi	
Break, 73°F	17400	psi	
Tensile Elongation (Break, 73°F)	3.0	%	ASTM D638

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Mechanical	Nominal Value	Unit	Test Method
Tensile Strain			ISO 527-2
Break, -40°F	2.9	%	
Break, 73°F	3.0	%	
Flexural Modulus (73°F)	891000	psi	ASTM D790
Flexural Modulus (73°F)	914000	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (73°F)	3.8	ft·lb/in²	ISO 179
Charpy Unnotched Impact Strength			ISO 179
-22°F	26	ft·lb/in²	
73°F	28	ft·lb/in²	
Notched Izod Impact (73°F)	1.2	ft·lb/in	ASTM D256
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	401	°F	
Heat Deflection Temperature (264 psi, Unannealed)	401	°F	ISO 75-2/A
Peak Melting Temperature	433	°F	ASTM D3418
Melting Temperature (DSC)	433	°F	ISO 3146
CLTE - Flow	1.9E-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	266	°F	
0.06 in	266	°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	3.70		
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
0.06 in	HB		
0.12 in	HB		

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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.