Ultradur® B 4040 G6

Polybutylene Terephthalate + PET

BASF Corporation

Message:

Injection molding grade with 30 % glass fibers for industrial parts with excellent surface quality, for example external door handles in vehicles, visible sunroof frames, oven door handles, toaster casings, external mirrors, rear screen wiper arms in vehicles and sunroof wind deflectors. Formerly called KR 4040 G6.

General Information	
UL YellowCard	E36632-531679
Filler / Reinforcement	Glass Fiber,30% Filler by Weight
Features	Good Surface Finish
Uses	Appliance Components Automotive Applications Handles Industrial Parts
Agency Ratings	EC 1907/2006 (REACH)
RoHS Compliance	RoHS Compliant
Appearance	Black Colors Available
Forms	Pellets
Processing Method	Injection Molding
Multi-Point Data	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-PET

Physical	Nominal Value	Unit	Test Method
Density	1.55	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
Molding Shrinkage			ISO 294-4
Across Flow	0.90	%	
Flow	0.30	%	
Water Absorption			ISO 62
Saturation, 23°C	0.40	%	
Equilibrium, 23°C, 50% RH	0.20	%	

Viscosity Number [1]	105	cm^3/g	ISO 307
Mold Shrinkage [2]			
free, longitudinal	0.18	%	
free, transverse	0.99	%	
Maximum Service Temperature - short cycle operation	210	°C	
Temperature Index - at 50% loss of tensile strength			IEC 60216
-- [3]	140	°C	
-- [4]	160	°C	
Automotive Materials (> 1.00 mm)	Passed		FMVSS 302
ISO Type	PBT-PET, MCGHLR, 11-110, GF30		ISO 7792
Screw Speed	< 250	mm/sec	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	10500	MPa	ISO 527-2
Tensile Stress (Break)	145	MPa	ISO 527-2
Tensile Strain (Break)	2.6	%	ISO 527-2
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (23°C)	8.0	kJ/m^2	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	55	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	200	°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	1050	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	4.00		
1 MHz	3.80		
Dissipation Factor			IEC 60250
100 Hz	1.6E-3		
1 MHz	0.017		
Comparative Tracking Index (Solution A)	250	V	IEC 60112
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flammability Classification			IEC 60695-11-10, -20
0.800 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	250 to 280	°C
Mold Temperature	60.0 to 100	°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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