

Ultradur® B 4560

Polybutylene Terephthalate

BASF Corporation

Message:

Medium viscosity injection molding grade for industrial parts in the automotive field, for example for head lamp bezel. Suitable for direct metallizing.

General Information			
Features	Medium Viscosity		
	Metallizable		
Uses	Automotive Applications		
	Industrial Parts		
Agency Ratings	EC 1907/2006 (REACH)		
RoHS Compliance	RoHS Compliant		
Appearance	Black		
	Colors Available		
	Natural Color		
Forms	Pellets		
Processing Method	Injection Molding		
Resin ID (ISO 1043)	PBT		
Physical	Nominal Value	Unit	Test Method
Density	1.30	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	35.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.6	%	
Flow	1.3	%	
Water Absorption			ISO 62
Saturation, 23°C	0.50	%	
Equilibrium, 23°C, 50% RH	0.25	%	
Viscosity Number ¹	112	cm ³ /g	ISO 307
Mold Shrinkage ²			
free, longitudinal	1.5	%	
free, transverse	1.7	%	
Maximum Service Temperature - short cycle operation	160	°C	
Automotive Materials (> 1.00 mm)	Pass		FMVSS 302
ISO Type	PBT, MGHLNR, 09-030		ISO 7792
Screw Speed	< 250	mm/sec	

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2600	MPa	ISO 527-2
Tensile Stress (Yield)	60.0	MPa	ISO 527-2/50
Tensile Strain (Yield)	3.7	%	ISO 527-2/50
Nominal Tensile Strain at Break	30	%	ISO 527-2/50
Flexural Modulus	2600	MPa	ISO 178
Flexural Stress	90.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	4.9	kJ/m ²	
23°C	3.8	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	85	kJ/m ²	
23°C	140	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	135	°C	ISO 75-2/B
1.8 MPa, Unannealed	60.0	°C	ISO 75-2/A
Melting Temperature	223	°C	ISO 11357-3
CLTE - Flow (23 to 80°C)	1.3E-4 to 1.6E-4	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.27	W/m/K	DIN 52612
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	3.40		
1 MHz	3.30		
Dissipation Factor			IEC 60250
100 Hz	2.0E-3		
1 MHz	0.020		
Comparative Tracking Index (Solution A)	550	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flammability Classification (1.60 mm)	HB		IEC 60695-11-10, -20
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	250	°C	
Middle Temperature	255	°C	
Front Temperature	260	°C	
Nozzle Temperature	260	°C	

Processing (Melt) Temp	230 to 275	°C
Mold Temperature	40.0 to 70.0	°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 |

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