

Ultradur® B 4300 M5

Polybutylene Terephthalate

BASF Corporation

Message:

25 % mineral reinforced injection molding grade for parts with good surface finish and low warpage tendency (eg housings and visible partson home appliances).

General Information			
Filler / Reinforcement	Mineral,25% Filler by Weight		
Features	Good Surface Finish		
	Low Warpage		
Uses	Appliance Components		
	Housings		
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-M25		
Physical	Nominal Value	Unit	Test Method
Density	1.51	g/cm ³	ISO 1183
Apparent Density	0.70 to 0.80	g/cm ³	
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	14.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.7	%	
Flow	1.8	%	
Water Absorption			ISO 62
Saturation, 23°C	0.40	%	
Equilibrium, 23°C, 50% RH	0.20	%	
Viscosity Number ¹	117	cm ³ /g	ISO 307
Mold Shrinkage ²			
free, longitudinal	1.7	%	
free, transverse	1.8	%	
Maximum Service Temperature - short cycle operation	200	°C	

Temperature Index - at 50% loss of tensile strength			IEC 60216
-- ³	120	°C	
-- ⁴	130	°C	
Automotive Materials (> 1.00 mm)	Passed		FMVSS 302
Screw Speed	< 250	mm/sec	
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness (H 358/30)	170	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	4000	MPa	ISO 527-2
Tensile Stress (Break)	56.0	MPa	ISO 527-2
Tensile Strain (Break)	7.5	%	ISO 527-2
Tensile Creep Modulus ⁵ (1000 hr)	2000	MPa	ISO 899-1
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	4.0	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	80	kJ/m ²	
23°C	100	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	195	°C	ISO 75-2/B
1.8 MPa, Unannealed	90.0	°C	ISO 75-2/A
Melting Temperature	223	°C	ISO 11357-3
CLTE - Flow (23 to 80°C)	7.0E-5 to 1.1E-4	cm/cm/°C	ISO 11359-2
Specific Heat	1500	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	3.60		
1 MHz	3.60		
Dissipation Factor			IEC 60250
100 Hz	1.2E-3		
1 MHz	0.015		
Comparative Tracking Index			IEC 60112
Solution A	225	V	
Solution B	150	V	
Flammability	Nominal Value	Unit	Test Method
Flammability Classification			IEC 60695-11-10, -20
0.400 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	240	°C
Middle Temperature	245	°C
Front Temperature	250	°C
Nozzle Temperature	250	°C
Processing (Melt) Temp	250 to 275	°C
Mold Temperature	40.0 to 80.0	°C

NOTE

1. solution 0,005 g/ml Phenole/1,2
Dichlorbenzol 1:1
2. plate with film gate 150*150*3
mm³
3. 20000 h
4. 5000 h
5. strain <= 0.5%, 23°C

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