

Ultradur® B 4500 FC

Polybutylene Terephthalate

BASF Corporation

Message:

Ultradur B 4500 FC is a general-purpose food contact grade injection molding PBT grade.

General Information			
Features	Food Contact Acceptable		
	General Purpose		
Agency Ratings	EC 1907/2006 (REACH)		
RoHS Compliance	RoHS Compliant		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.30	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	19.0	cm³/10min	ISO 1133
Water Absorption			ISO 62
Saturation, 23°C	0.50	%	
Equilibrium, 23°C, 50% RH	0.25	%	
Viscosity Number (Reduced Viscosity)	130.0	ml/g	ISO 1628
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness	130	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	2500	MPa	ISO 527-2
Tensile Stress (Yield, 23°C)	55.0	MPa	ISO 527-2
Tensile Strain (Yield, 23°C)	3.7	%	ISO 527-2
Nominal Tensile Strain at Break (23°C)	> 50	%	ISO 527-2
Tensile Creep Modulus (1000 hr)	1200	MPa	ISO 899-1
Flexural Stress (23°C)	85.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	6.0	kJ/m²	ISO 179
Charpy Unnotched Impact Strength (23°C)	290	kJ/m²	ISO 179
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	65.0	°C	ISO 75-2/A
Melting Temperature (DSC)	223	°C	ISO 3146
CLTE - Flow	1.4E-4	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+13	ohms	IEC 60093
Volume Resistivity	1.0E+14	ohms·cm	IEC 60093

Dielectric Constant			IEC 60250
100 Hz	3.30		
1 MHz	3.30		
Dissipation Factor			IEC 60250
100 Hz	1.0E-3		
1 MHz	0.020		
Comparative Tracking Index	550	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm)	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	100 to 120	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.040	%	
Processing (Melt) Temp	250 to 270	°C	
Mold Temperature	40.0 to 80.0	°C	
Injection Pressure	3.45 to 10.3	MPa	
Injection Rate	Fast		
Back Pressure	< 1.00	MPa	

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