



Ultradur® B 4500 FC

BASF Corporation - Polybutylene Terephthalate

Monday, November 4, 2019

General Information

Product Description

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

General

Material Status	• Commercial: Active
Availability	• Europe • North America
Features	• Food Contact Acceptable • General Purpose
Agency Ratings	• EC 1907/2006 (REACH)
RoHS Compliance	• RoHS Compliant
Forms	• Pellets
Processing Method	• Injection Molding

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.30	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	19	cm ³ /10min	ISO 1133
Water Absorption (Saturation, 73°F)	0.50	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.25	%	ISO 62
Viscosity Number (Reduced Viscosity)	130.0	ml/g	ISO 1628
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73°F)	363000	psi	ISO 527-2
Tensile Stress (Yield, 73°F)	7980	psi	ISO 527-2
Tensile Strain (Yield, 73°F)	3.7	%	ISO 527-2
Nominal Tensile Strain at Break (73°F)	> 50	%	ISO 527-2
Tensile Creep Modulus (1000 hr)	174000	psi	ISO 899-1
Flexural Stress (73°F)	12300	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	2.9	ft-lb/in ²	ISO 179
Charpy Unnotched Impact Strength (73°F)	140	ft-lb/in ²	ISO 179
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness	18900	psi	ISO 2039-1
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (66 psi, Unannealed)	329	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	149	°F	ISO 75-2/A
Melting Temperature (DSC)	433	°F	ISO 3146
CLTE - Flow	7.8E-5	in/in/°F	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+13	ohms	IEC 60093
Volume Resistivity	1.0E+16	ohms·cm	IEC 60093
Dielectric Constant			IEC 60250
100 Hz	3.30		
1 MHz	3.30		

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Electrical	Nominal Value	Unit	Test Method
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 (0.06 in)	HB		UL 94

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	104 to 176	°F
Injection Pressure	500 to 1500	psi
Injection Rate	Fast	
Back Pressure	< 145	psi

Notes

¹ Typical properties: these are not to be construed as specifications.