


	Ultradur[®] B	 BASF The Chemical Company
Product Information	4500	
Oct 2009	PBT	
	(Polybutylene	
	Terephthalate)	

Product Description

Ultradur B 4500 is a general-purpose injection molding PBT grade for high precision, high toughness and dimensionally stable engineering parts. It conforms to FDA requirements of 21 CFR 177.1660.

Applications

Typical applications include cams, valve cones, sewing machine components, and central heating meters.

PHYSICAL	ISO Test Method	Property Value
Density, g/cm ³	1183	1.3
Viscosity Number, cm ³ /g	1628	130
Mold Shrinkage, parallel, %	294-4	1.59
Mold Shrinkage, normal, %	294-4	1.88
Moisture, %	62	
(50% RH)		0.25
(Saturation)		0.5
RHEOLOGICAL	ISO Test Method	Property Value
Melt Volume Rate (250 °C/2.16 Kg), cc/10min.	1133	19
MECHANICAL	ISO Test Method	Property Value
Tensile Modulus, MPa	527	
23°C		2,500
Tensile stress at yield, MPa	527	
23°C		60
Tensile strain at yield, %	527	
23°C		3.7
Nominal strain at break, %	527	
23°C		>50

Flexural Modulus, MPa	178	
23°C		2,300
Tensile Creep Modulus (1000h), MPa	899	1,200
Tensile Creep Modulus (1h), MPa	899	1,800
IMPACT	ISO Test Method	Property Value
Charpy Notched, kJ/m ²	179	
23°C		6
-30°C		4
Charpy Unnotched, kJ/m ²	179	
23°C		290
THERMAL	ISO Test Method	Property Value
Melting Point, °C	3146	223
HDT A, °C	75	65
Coef. of Linear Thermal Expansion, Parallel, mm/mm °C		1.45 X10 ⁻⁴
ELECTRICAL	ISO Test Method	Property Value
Comparative Tracking Index	IEC 60112	550
Volume Resistivity	IEC 60093	>1E13
Surface Resistivity	IEC 60093	1E13
Dielectric Constant (100 Hz)	IEC 60250	3.3
Dielectric Constant (1 MHz)	IEC 60250	3.3
Dissipation Factor (100 Hz)	IEC 60250	10
Dissipation Factor (1 MHz)	IEC 60250	200
UL RATINGS	ISO Test Method	Property Value
Flammability Rating, 1.5mm	UL94	HB
Relative Temperature Index, 1.5mm	UL746B	
Mechanical w/ Impact, °C		105
Electrical, °C		130

Dongguan Yi-Ming Plastic Chemical Co., Ltd.

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