

Ultradur® B 2550

PBT (Polybutylene Terephthalate)



Product Description

Ultradur B 2550 is an unfilled, easy flow PBT offering good heat resistance. It conforms to FDA requirements of 21 CFR 177.1660.

Applications

Applications include monofilament, bristles and heat-resistant coatings on paper and board used for packaging frozen foods and oven-ready meals. Also for injection molding applications that call for high flowability.

PHYSICAL	ISO Test Method	Property Value
Density, g/cm ³	1183	1.3
Viscosity Number, cm ³ /g	1628	107
Mold Shrinkage, parallel, %	294-4	1.6
Mold Shrinkage, normal, %	294-4	1.91
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	40
MECHANICAL	ISO Test Method	Property Value
Tensile Modulus, MPa	527	
23°C		2,500
Tensile stress at yield, MPa	527	
-40°C		94
23°C		60
Tensile strain at yield, %	527	
23°C		3.7
Nominal strain at break, %	527	
23°C		35
Flexural Modulus, MPa	178	
23°C		2,200
Tensile Creep Modulus (1000h), MPa	899	1,100
Tensile Creep Modulus (1h), MPa	899	1,500
IMPACT	ISO Test Method	Property Value
Izod Notched Impact, kJ/m ²	180	
23°C		4
Charpy Notched, kJ/m ²	179	
23°C		6
-30°C		4
Charpy Unnotched, kJ/m ²	179	
23°C		250
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	500
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	13
Dissipation Factor (1 MHz)	IEC 60250	200

Processing Guidelines

Material Handling

Max. Water content: 0.04%

To ensure optimum part performance, this product must be dried prior to molding and maintained at a moisture level of less than 0.04%. Dehumidifying or desiccant dryers operating at 100-120 °C at 4 hours drying time is recommended. Further information concerning safe handling procedures can be obtained from the Material Safety Data Sheet. Alternatively, please contact your BASF representative.

Typical Profile

Melt Temperature 260-270 °C (500-518 °F)

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Zone 1: 260-265 °C (500-509 °F)

Zone 2: 265-275 °C (509-527 °F)

Zone 3: 260-270 °C (500-518 °F)

Zone 4: 255-265 °C (491-509 °F)

Head: 260-270 °C (500-518 °F)

Pump: 260-270 °C (500-518 °F)

Die Zones: 260-270 °C (500-518 °F)

Recommended Screw:

Three section screw: 6D/7D/9D + 3D

Compression Ratio: 3.5:1 to 4:1

L/D Ratio: 25:1 minimum

Water Bath Temperature: 45-60 °C (113-140 °F)

Note

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