

Ultradur® B 2550

Polybutylene Terephthalate

BASF Corporation

Message:

Very easy flowing grade for heat-resistant coatings on paper and board as well as for the production of monofilaments and bristles. Also for injection molding applications that call for high flowability.

General Information			
UL YellowCard	E36632-531638		
Features	High Flow		
Uses	Monofilaments		
	Paper Coatings		
Agency Ratings	EC 1907/2006 (REACH)		
	ULC Unspecified Rating		
RoHS Compliance	RoHS Compliant		
Appearance	Natural Color		
Forms	Pellets		
Processing Method	Injection Molding		
Multi-Point Data	Creep Modulus vs. Time (ISO 11403-1)		
	Isochronous Stress vs. Strain (ISO 11403-1)		
	Isothermal Stress vs. Strain (ISO 11403-1)		
	Secant Modulus vs. Strain (ISO 11403-1)		
	Specific Volume vs Temperature (ISO 11403-2)		
	Viscosity vs. Shear Rate (ISO 11403-2)		
Resin ID (ISO 1043)	PBT		
Physical	Nominal Value	Unit	Test Method
Density	1.30	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)	45.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.9	%	
Flow	1.6	%	
Water Absorption			ISO 62
Saturation, 23°C	0.50	%	
Equilibrium, 23°C, 50% RH	0.25	%	
Viscosity Number ¹	107	cm ³ /g	ISO 307
Mold Shrinkage ²			

free, longitudinal	1.5	%	
free, transverse	1.5	%	
Maximum Service Temperature - short cycle operation	200	°C	
Temperature Index - at 50% loss of tensile strength			IEC 60216
-- ³	120	°C	
-- ⁴	140	°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)	130	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2500	MPa	ISO 527-2
Tensile Stress (Yield)	57.0	MPa	ISO 527-2/50
Tensile Strain (Yield)	3.7	%	ISO 527-2/50
Nominal Tensile Strain at Break	35	%	ISO 527-2/50
Tensile Creep Modulus ⁵ (1000 hr)	1100	MPa	ISO 899-1
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	4.0	kJ/m ²	
23°C	4.1	kJ/m ²	
Charpy Unnotched Impact Strength (23°C)	250	kJ/m ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	165	°C	ISO 75-2/B
1.8 MPa, Unannealed	65.0	°C	ISO 75-2/A
Melting Temperature	223	°C	ISO 11357-3
CLTE - Flow (23 to 80°C)	1.3E-4 to 1.6E-4	cm/cm/°C	ISO 11359-2
Specific Heat	1500	J/kg/°C	
Thermal Conductivity	0.27	W/m/K	DIN 52612
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	3.30		
1 MHz	3.30		
Dissipation Factor			IEC 60250
100 Hz	1.3E-3		
1 MHz	0.020		
Comparative Tracking Index			IEC 60112
Solution A	500	V	
Solution B	450	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	250	°C	
Middle Temperature	255	°C	
Front Temperature	260	°C	
Nozzle Temperature	260	°C	
Processing (Melt) Temp	245 to 275	°C	
Mold Temperature	40.0 to 70.0	°C	
NOTE			

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

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