

Ultradur® B 6550 FC

PBT (Polybutylene Terephthalate)



Product Description

Ultradur B 6550 FC is a high viscosity food contact PBT extrusion grade.

Applications

Typical applications include semi-finished products, profile and hollow rods.

| PHYSICAL | ISO Test Method | Property Value |
|--|-----------------|----------------|
| Density, g/cm | 1183 | 1.30 |
| Viscosity Number, cm/g | 1628 | 160 |
| Mold Shrinkage, parallel, % | 294-4 | 1.7 |
| Mold Shrinkage, normal, % | 294-4 | 2.1 |
| MECHANICAL | ISO Test Method | Property Value |
| Tensile Modulus, MPa | 527 | |
| 23C | | 2,400 |
| Tensile stress at yield, MPa | 527 | |
| 23C | | 54 |
| Tensile strain at yield, % | 527 | |
| 23C | | 3.5 |
| Nominal strain at break, % | 527 | |
| 23C | | 100 |
| Flexural Strength, MPa | 178 | |
| 23C | | 85 |
| Ball Indentation, MPa | 2039-1 | 130 |
| Tensile Creep Modulus (1000h), MPa | 899 | 1,100 |
| IMPACT | ISO Test Method | Property Value |
| Charpy Notched, kJ/m ² | 179 | |
| 23C | | 6 |
| Charpy Unnotched, kJ/m ² | 179 | |
| 23C | | N |
| THERMAL | ISO Test Method | Property Value |
| Melting Point, C | 3146 | 223 |
| HDT A, C | 75 | 55 |
| Coef. of Linear Thermal Expansion, Parallel, mm/mm C | | 1.45 X10-4 |
| ELECTRICAL | ISO Test Method | Property Value |
| Comparative Tracking Index | IEC 60112 | 600 |
| Volume Resistivity | IEC 60093 | 1E14 |
| 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 |



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 degC (212-248 degF) 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 230-290 degC (446-554 degF)

Temperature Settings (degC):

Extruder 250/240/230 degC (482/464/446 degF)

Adaptor 225 deg C (437 def F)

Die 215 deg C (419 deg F)

Screw Parameters

| | |
|--------------------|-------------------------|
| Metering Section | 45% |
| Transition Section | 3 to 4 flights |
| Feed Section | balance of screw length |
| Compression Ratio | 3:1 |
| L/D Ratio | 20:1 |

Tooling & Sizing

Die to Finished Tube dia. 2.0-2.5:1 Die Gap 3-4 times the desired wall thickness

The vacuum water calibration method is recommended when producing tube diameters 8 mm and below. Water temperature should be 20 deg C (68 deg F).

Note

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