

## Ultradur® B 6550 LN

PBT

BASF

High viscosity extrusion grade for loose-buffer tubes in fibre optical cable applications and for semi-finished products, profiles and tubes and sheet.

Abbreviated designation according to ISO 1043-1: PBT

| Rheological properties     | Value | Unit      | Test Standard |
|----------------------------|-------|-----------|---------------|
| <b>ISO Data</b>            |       |           |               |
| Melt volume-flow rate, MVR | 9.5   | cm³/10min | ISO 1133      |
| Temperature                | 250   | °C        | -             |
| Load                       | 2.16  | kg        | -             |

| Mechanical Properties                   | Value    | Unit  | Test Standard |
|-----------------------------------------|----------|-------|---------------|
| <b>ISO Data</b>                         |          |       |               |
| Tensile Modulus                         | 2600     | MPa   | ISO 527       |
| Yield stress                            | 56       | MPa   | ISO 527       |
| Yield strain                            | 3.5      | %     | ISO 527       |
| Nominal strain at break                 | >50      | %     | ISO 527       |
| Impact Strength (Charpy), +23°C         | no break | kJ/m² | ISO 179/1eU   |
| Impact Strength (Charpy), -30°C         | 220      | kJ/m² | ISO 179/1eU   |
| Notched Impact Strength (Charpy), +23°C | 5        | kJ/m² | ISO 179/1eA   |
| Notched Impact Strength (Charpy), -30°C | 5        | kJ/m² | ISO 179/1eA   |

| Thermal Properties                          | Value | Unit  | Test Standard  |
|---------------------------------------------|-------|-------|----------------|
| <b>ISO Data</b>                             |       |       |                |
| Melting Temperature (10°C/min)              | 223   | °C    | ISO 11357-1/-3 |
| Temp. of deflection under load (1.80 MPa)   | 50    | °C    | ISO 75-1/-2    |
| Temp. of deflection under load (0.45 MPa)   | 135   | °C    | ISO 75-1/-2    |
| Coeff. of Linear Therm. Expansion, parallel | 115   | E-6/K | ISO 11359-1/-2 |
| Coeff. of Linear Therm. Expansion, normal   | 115   | E-6/K | ISO 11359-1/-2 |
| Burning Behav. at 1.5 mm Nom. Thickn.       | HB    | class | UL 94          |
| Thickness tested                            | 1.5   | mm    | -              |
| Burning Behav. at thickness h               | HB    | class | UL 94          |
| Thickness tested                            | 0.8   | mm    | -              |

| Electrical Properties        | Value | Unit  | Test Standard |
|------------------------------|-------|-------|---------------|
| <b>ISO Data</b>              |       |       |               |
| Relative permittivity, 100Hz | 3.4   | -     | IEC 62631-2-1 |
| Relative permittivity, 1MHz  | 3.2   | -     | IEC 62631-2-1 |
| Dissipation Factor, 100Hz    | 19    | E-4   | IEC 62631-2-1 |
| Dissipation Factor, 1MHz     | 219   | E-4   | IEC 62631-2-1 |
| Volume Resistivity           | >1E13 | Ohm*m | IEC 62631-3-1 |
| Surface Resistivity          | 1E13  | Ohm   | IEC 62631-3-2 |
| Electric Strength            | 39    | kV/mm | IEC 60243-1   |
| Comparative tracking index   | 600   | -     | IEC 60112     |

| Other Properties    | Value | Unit  | Test Standard  |
|---------------------|-------|-------|----------------|
| <b>ISO Data</b>     |       |       |                |
| Water Absorption    | 0.4   | %     | Sim. to ISO 62 |
| Humidity absorption | 0.25  | %     | Sim. to ISO 62 |
| Density             | 1300  | kg/m³ | ISO 1183       |

| Material Specific Properties | Value | Unit  | Test Standard       |
|------------------------------|-------|-------|---------------------|
| <b>ISO Data</b>              |       |       |                     |
| Viscosity number             | 160   | cm³/g | ISO 307, 1157, 1628 |

| Test specimen production              | Value | Unit | Test Standard |
|---------------------------------------|-------|------|---------------|
| <b>ISO Data</b>                       |       |      |               |
| Injection Molding, melt temperature   | 260   | °C   | ISO 294       |
| Injection Molding, mold temperature   | 60    | °C   | ISO 294       |
| Injection Molding, injection velocity | 200   | mm/s | ISO 294       |

## Ultradur® B 6550 LN

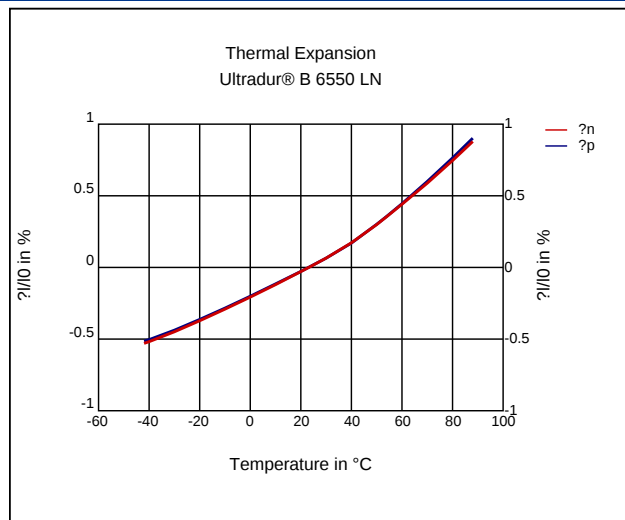
### PBT

BASF

| Processing Recommendation Injection Molding | Value     | Unit | Test Standard |
|---------------------------------------------|-----------|------|---------------|
| Pre-drying - Temperature                    | 80 - 120  | °C   | -             |
| Pre-drying - Time                           | 4         | h    | -             |
| Processing humidity                         | ≤0.04     | %    | -             |
| Melt temperature                            | 260 - 270 | °C   | -             |
| Mold temperature                            | 40 - 80   | °C   | -             |

### Diagrams

#### Coeff. of linear thermal expansion, normal



### Characteristics

#### Processing

Injection Molding, Film Extrusion, Profile Extrusion, Sheet Extrusion, Other Extrusion

#### Delivery form

Pellets

#### Injection Molding

##### PREPROCESSING

Pre/Post-processing, max. allowed water content: .04 %  
Pre/Post-processing, Pre-drying, Temperature: 80 - 120 °C  
Pre/Post-processing, Pre-drying, Time: 4 h

##### PROCESSING

injection molding, Melt temperature, range: 260 - 270 °C  
injection molding, Melt temperature, recommended: 260 °C  
injection molding, Mold temperature, range: 40 - 80 °C  
injection molding, Mold temperature, recommended: 60 °C

#### Other Extrusion

##### PREPROCESSING

Pre/Post-processing, max. allowed water content: .04 %  
Pre/Post-processing, Pre-drying, Temperature: 80 - 120 °C  
Pre/Post-processing, Pre-drying, Time: 4 h

##### PROCESSING

Extrusion, Prepreg, Melt temperature: 250 - 270 °C  
Extrusion, Pipes, Melt temperature: 250 - 270 °C  
Extrusion, cable sheathing, Melt temperature: 260 - 270 °C

#### Profile extrusion

##### PREPROCESSING

## Ultradur® B 6550 LN

PBT

BASF

Pre/Post-processing, max. allowed water content: .04 %  
Pre/Post-processing, Pre-drying, Temperature: 80 - 120 °C  
Pre/Post-processing, Pre-drying, Time: 4 h

### PROCESSING

Extrusion, Profiles, Melt temperature: 250 - 270 °C

### Sheet Extrusion

#### PREPROCESSING

Pre/Post-processing, max. allowed water content: .04 %  
Pre/Post-processing, Pre-drying, Temperature: 80 - 120 °C  
Pre/Post-processing, Pre-drying, Time: 4 h

### PROCESSING

Extrusion, Plates, Melt temperature: 250 - 270 °C

### Chemical Media Resistance

#### Acids

- ✓ Acetic Acid (5% by mass) (23°C)