

Product Texts

Terluran ECO® HI-10 BC50 is a medium flow, injection molding grade with very high resistance to impact with excellent heat distortion and suitable for injection molding and extrusion. Terluran ECO® HI-10 BC50 contains bio-attributed content from styrene monomer from renewable sources. The use of renewable feedstock brings significant product carbon footprint savings. Terluran ECO® HI-10 BC50 is produced according to an ISCC-certified mass balance approach, and has identical physical and mechanical properties as its fossil-based counterpart. All the same regulatory documents are also available.

Terluran ECO HI-10 BC50 is an ISCC compliant product leading to a substitution of fossil source styrene with attributed ISCC certified bio-circular styrene.

| Processing/Physical Characteristics | Value | Unit | Test Standard |
|---|-------|------------------------|-----------------|
| ISO Data | | | |
| ^[C] Melt volume-flow rate, MVR | 5.5 | cm ³ /10min | ISO 1133 |
| Temperature | 220 | °C | - |
| Load | 10 | kg | - |
| Molding shrinkage, parallel | 0.6 | % | ISO 294-4, 2577 |
| ^[C] Density of melt | 896 | kg/m ³ | - |
| ^[C] Thermal conductivity of melt | 0.16 | W/(m K) | - |
| ^[C] Spec. heat capacity of melt | 2400 | J/(kg K) | - |
| ^[C] Ejection temperature | 102 | °C | - |

[C]: CAMPUS

| Mechanical properties | Value | Unit | Test Standard |
|--|-------|-------------------|---------------|
| ISO Data | | | |
| ^[C] Tensile Modulus | 1900 | MPa | ISO 527 |
| ^[C] Yield stress | 38 | MPa | ISO 527 |
| ^[C] Yield strain | 2.8 | % | ISO 527 |
| ^[C] Nominal strain at break | 9 | % | ISO 527 |
| Flexural strength | 56 | MPa | ISO 178 |
| ^[C] Charpy impact strength, -30°C | 140 | kJ/m ² | ISO 179/1eU |
| ^[C] Charpy notched impact strength, +23°C | 35 | kJ/m ² | ISO 179/1eA |
| ^[C] Charpy notched impact strength, -30°C | 13 | kJ/m ² | ISO 179/1eA |
| Izod notched impact strength, +23°C | 36 | kJ/m ² | ISO 180/1A |
| Izod notched impact strength | 14 | kJ/m ² | ISO 180/1A |
| Temperature | -30 | °C | - |
| Ball indentation hardness | 74 | MPa | ISO 2039-1 |

[C]: CAMPUS

| Thermal properties | Value | Unit | Test Standard |
|---|-------|-------|-----------------|
| ISO Data | | | |
| ^[C] Temp. of deflection under load, 1.80 MPa | 93 | °C | ISO 75-1/-2 |
| ^[C] Temp. of deflection under load, 0.45 MPa | 97 | °C | ISO 75-1/-2 |
| Vicat softening temperature, A | 103 | °C | ISO 306 |
| ^[C] Vicat softening temperature, B | 90 | °C | ISO 306 |
| Coeff. of linear therm. expansion, parallel | 95 | E-6/K | ISO 11359-1/-2 |
| ^[C] Burning Behav. at 1.5 mm nom. thickn. | HB | class | IEC 60695-11-10 |
| Thickness tested | 1.5 | mm | - |
| Yellow Card available | yes | - | - |
| ^[C] Burning Behav. at thickness h | HB | class | IEC 60695-11-10 |
| Thickness tested | 3.0 | mm | - |
| Yellow Card available | yes | - | - |

Other Standards^[S]

| | | | |
|-----------------------------------|------|---------|-------------|
| Thermal Conductivity, solid state | 0.17 | W/(m K) | ISO 22007-4 |
|-----------------------------------|------|---------|-------------|

S: These properties are reported by the producer according standards that are different to our defaults. [C]: CAMPUS

| Electrical properties | Value | Unit | Test Standard |
|---|-------|------|---------------|
| ISO Data | | | |
| ^[C] Relative permittivity, 100Hz | 2.9 | - | IEC 62631-2-1 |
| ^[C] Relative permittivity, 1MHz | 2.8 | - | IEC 62631-2-1 |

Terluran ECO® HI-10 BC50

ABS

INEOS Styrolution

| | | | |
|--|-----------------|-------|---------------|
| ^[C] Dissipation factor, 100Hz | 54 | E-4 | IEC 62631-2-1 |
| ^[C] Dissipation factor, 1MHz | 82 | E-4 | IEC 62631-2-1 |
| ^[C] Volume resistivity | >1E13 | Ohm*m | IEC 62631-3-1 |
| ^[C] Surface resistivity | 1E13 | Ohm | IEC 62631-3-2 |

[C]: CAMPUS

| Other properties | Value | Unit | Test Standard |
|------------------------------------|--------------|-------------------|----------------------|
| ^[C] Water absorption | 1.03 | % | Sim. to ISO 62 |
| ^[C] Humidity absorption | 0.21 | % | Sim. to ISO 62 |
| ^[C] Density | 1030 | kg/m ³ | ISO 1183 |
| Bulk density | 600 | kg/m ³ | - |

[C]: CAMPUS

| Processing Recommendation Injection Molding | Value | Unit | Test Standard |
|--|------------------|-------------|----------------------|
| Pre-drying - Temperature | 80 | °C | - |
| Pre-drying - Time | 2 - 4 | h | - |
| Melt temperature | 220 - 260 | °C | - |
| Mold temperature | 30 - 80 | °C | - |
| Injection speed | 200 | mm/s | - |

| Processing Recommendation Extrusion | Value | Unit | Test Standard |
|--|------------------|-------------|----------------------|
| Type of extrusion | profile | - | - |
| Pre-drying - Temperature | 80 | °C | - |
| Pre-drying - Time | 2 - 4 | h | - |
| Melt temperature | 230 | °C | - |
| Type of extrusion | sheet | - | - |
| Pre-drying - Temperature | 80 | °C | - |
| Pre-drying - Time | 2 - 4 | h | - |
| Melt temperature | 210 - 240 | °C | - |

Characteristics**Processing**

Injection Molding, Profile Extrusion, Sheet Extrusion, Other Extrusion

Delivery form

Pellets

Special Characteristics

High impact or impact modified, Heat stabilized or stable to heat

Certifications

Contains renewable resources, ISCC Plus

Regional Availability

North America, Europe, Near East/Africa

Other text information**Injection molding**

PREPROCESSING

Pre-drying, Temperature: 80°C

Pre-drying, Time: 2 - 4h

PROCESSING

Melt temperature, range: 220 - 260°C

Mold temperature, range: 30 - 80°C

Other extrusion

PREPROCESSING

Pre-drying, Temperature: 80°C

Pre-drying, Time: 2 - 4h

PROCESSING

Pipes, Melt temperature: 200 - 230°C

Profile extrusion

PREPROCESSING

Pre-drying, Temperature: 80°C

Pre-drying, Time: 2 - 4h

PROCESSING

Profiles, Melt temperature: 230°C

Sheet extrusion

PREPROCESSING

Pre-drying, Temperature: 80°C

Pre-drying, Time: 2 - 4h

PROCESSING

Plates, Melt temperature: 210 - 240°C