

Terluran ECO HI-10 BC50

Acrylonitrile Butadiene Styrene (ABS)

TECHNICAL DATASHEET

DESCRIPTION

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

FEATURES

- High toughness
- Very high impact
- Medium flow
- Great mechanical strength and rigidity
- High impact at sub-zero temperatures

APPLICATIONS

- Injection molding
- Compounding
- Appliance housings
- Lawn & garden components requiring superior toughness

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate 220 °C/10 kg	ISO 1133	cm ³ /10 min	5.5
Mechanical Properties			
Izod Notched Impact Strength, 23 °C	ISO 180/A	kJ/m ²	36
Izod Notched Impact Strength, -30 °C	ISO 180/A	kJ/m ²	14
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m ²	35
Charpy Notched Impact Strength, -30 °C	ISO 179/1eA	kJ/m ²	13
Charpy Unnotched, -30 °C	ISO 179/1eU	kJ/m ²	140
Tensile Stress at Yield, 23 °C	ISO 527	MPa	38
Tensile Strain at Yield, 23 °C	ISO 527	%	2.8
Tensile Modulus	ISO 527	MPa	1900
Nominal Strain at Break, 23 °C	ISO 527	%	9
Flexural Strength, 23 °C	ISO 178	MPa	56
Hardness, Ball Indentation	ISO 2039-1	MPa	74
Thermal Properties			

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Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	90
Vicat Softening Temperature, VST/A/50 (10N, 50 °C/h)	ISO 306	°C	103
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	93
Heat Deflection Temperature B; (annealed 4 h/80 °C; 0.45 MPa)	ISO 75	°C	97
Coefficient of Linear Thermal Expansion	ISO 11359	10 ⁻⁶ /°C	80 - 110
Thermal Conductivity	ISO 22007-4	W/(m K)	0.17
Electrical Properties			
Dissipation Factor (100 Hz)	IEC 62631-2-1	10 ⁻⁴	54
Dissipation Factor (1 MHz)	IEC 62631-2-1	10 ⁻⁴	82
Relative Permittivity (100 Hz)	IEC 62631-2-1	-	2.9
Relative Permittivity (1 MHz)	IEC 62631-2-1	-	2.8
Volume Resistivity	IEC 62631-3-1	Ohm*m	>10 ¹³
Surface Resistivity	IEC 62631-3-1	Ohm	>10 ¹³
Optical Properties			
Yellowness Index	DIN 6167	-	15
Other Properties			
Density	ISO 1183	kg/m ³	1030
Water Absorption, Saturated at 23 °C	ISO 62	%	1.03
Moisture Absorption, Equilibrium 23 °C/50% RH	ISO 62	%	0.21
Processing			
Linear Mold Shrinkage	ISO 294-4	%	0.4 - 0.7
Melt Temperature Range	ISO 294	°C	220 - 260
Mold Temperature Range	ISO 294	°C	30 - 80
Injection Velocity	ISO 294	mm/s	200
Drying Temperature	-	°C	80
Drying Time	-	h	2 - 4