

# Terrace End Caps



**Esthlec®**

Esthlec Terrace

Typical values for uncoloured product at 23 °C <sup>1)</sup>	Test method <sup>2)</sup>	Unit	Values <sup>3)</sup>
<b>Properties</b>			
Polymer abbreviation	-	-	ASA
Density	ISO 1183	kg/m <sup>3</sup>	1070
Water absorption, equilibrium in water at 23°C	similar to ISO 62	%	1.65
Water absorption, 24 h at 23°C	ISO 62	%	0.45
Moisture absorption, equilibrium 23°C/50% r.h.	similar to ISO 62	%	0.35
<b>Processing</b>			
Processing: Injection moulding (M), Extrusion (E), Blow moulding (B)	-	-	M
Melt volume-flow rate MVR 220 °C/10 kg	ISO 1133	cm <sup>3</sup> /10min	15
Pre-drying: Temperature	-	°C	80
Pre-drying: Time	-	h	2 - 4
Melt temperature, injection moulding	-	°C	240 - 280
Mould temperature, injection moulding	-	°C	40 - 80
Moulding shrinkage, free, longitudinal	-	%	0.4 - 0.7
<b>Flammability</b>			
UL94 rating at 1.6 mm thickness	UL-94	class	HB
Flammability by electrical sources of ignition, Method BH, d = 4 mm	IEC 60707	class	HB
Automotive materials (thickness d >=1mm)	-	-	+
<b>Mechanical properties</b>			
Tensile modulus	ISO 527-1/-2	MPa	2300
Yield stress, 50 mm/min	ISO 527-1/-2	MPa	48
Yield strain, 50 mm/min	ISO 527-1/-2	%	3.3
Nominal strain at break, 50 mm/min	ISO 527-1/-2	%	9
Tensile creep modulus, 1000 h, strain <= 0.5%, 23°C	ISO 899-1	MPa	1400
Flexural strength	ISO 178	MPa	70
Shear modulus	ISO 6721-2	MPa	800
Charpy unnotched impact strength (23°C)	ISO 179/1eU	kJ/m <sup>2</sup>	250
Charpy unnotched impact strength (-30°C)	ISO 179/1eU	kJ/m <sup>2</sup>	90
Charpy notched impact strength (23°C)	ISO 179/1eA	kJ/m <sup>2</sup>	17
Charpy notched impact strength (-30°C)	ISO 179/1eA	kJ/m <sup>2</sup>	4
Izod notched impact strength, method A (23°C)	ASTM D 256	J/m	180
Ball indentation hardness at 358 N/30 s	ISO 2039-1	MPa	80
<b>Thermal properties</b>			
HDT A (1.80 MPa), measured using dried specimens	ISO 75-1/-2	°C	97
HDT B (0.45 MPa), measured using dried specimens	ISO 75-1/-2	°C	101
Vicat softening temperature VST/A/50	ISO 306	°C	105
Vicat softening temperature VST/B/50	ISO 306	°C	97
Max. service temperature (short cycle operation)	-	°C	85
Coefficient of linear thermal expansion, longitudinal (23-80)°C	ISO 11359-1/-2	E-4/°C	0.8 - 1.1
Thermal conductivity	DIN 52612-1	W/(m K)	0.17
<b>Electrical properties</b>			
Relative permittivity (100Hz)	IEC 60250	-	3.7
Relative permittivity (1 MHz)	IEC 60250	-	3.4
Dissipation factor (100 Hz)	IEC 60250	E-4	110
Dissipation factor (1 MHz)	IEC 60250	E-4	240
Volume resistivity	IEC 60093	Ohm*m	1E12
Surface resistivity	IEC 60093	Ohm	1E13
Electric strength K20/K20	IEC 60243-1	kV/mm	35
Comparative tracking index, CTI, test liquid A	IEC 60112	-	600
<b>Features</b>			
Acrylonitrile styrene acrylate (ASA) polymers [Luran® S]			

Footnotes: 1) If product name or properties don't state otherwise. 2) Specimens according to CAMPUS. 3) The asterisk symbol '\*' signifies inapplicable properties.