



Apec® 1603

Standard grades / UV-stabilized

MVR (330°C/2.16kg) 25 cm³/10 min; high viscosity; UV stabilized; softening temperature (VST/B 120)=159 °C; injection molding - melt temperature 320 - 340°C

ISO Shortname

Property	Test Condition	Unit	Standard	typical Value
Rheological properties				
C Melt volume-flow rate	330 °C; 2.16 kg	cm³/10 min	ISO 1133	25
Melt mass-flow rate	330 °C; 2.16 kg	g/10 min	ISO 1133	26
C Molding shrinkage, parallel	60x60x2 mm	%	ISO 294-4	0.75
C Molding shrinkage, normal	60x60x2 mm	%	ISO 294-4	0.75
Mechanical properties (23 °C/50 % r. h.)				
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	2400
C Yield stress	50 mm/min	MPa	ISO 527-1,-2	68
C Yield strain	50 mm/min	%	ISO 527-1,-2	6.3
C Nominal strain at break	50 mm/min	%	ISO 527-1,-2	> 50
C Charpy impact strength	23 °C	kJ/m²	ISO 179-1eU	N
C Charpy impact strength	-30 °C	kJ/m²	ISO 179-1eU	N
Flexural modulus	2 mm/min	MPa	ISO 178	2400
Flexural strength	2 mm/min	MPa	ISO 178	103
Ball indentation hardness		N/mm²	ISO 2039-1	120
Thermal properties				
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	137
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	150
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	159
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.65
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.65
C Burning behavior UL 94 (1.5 mm)	1.5 mm	Class	UL 94	HB
C Burning behavior UL 94	3.0 mm	Class	UL 94	HB
C Oxygen index	Method A	%	ISO 4589-2	26
Glow wire test (GWFI)		°C	IEC 60695-2-12	900
Electrical properties (23 °C/50 % r. h.)				
C Relative permittivity	100 Hz	-	IEC 60250	3.0
C Relative permittivity	1 MHz	-	IEC 60250	2.9
C Dissipation factor	100 Hz	10 ⁻⁴	IEC 60250	10
C Dissipation factor	1 MHz	10 ⁻⁴	IEC 60250	90
C Volume resistivity		Ohm-m	IEC 60093	1E15
C Surface resistivity		Ohm	IEC 60093	1E16
C Electrical strength	1 mm	kV/mm	IEC 60243-1	35
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	250
Comparative tracking index CTI M	Solution B	Rating	IEC 60112	125
Electrolytic corrosion		Rating	IEC 60426	A1
Other properties (23 °C)				
C Water absorption (saturation value)	Water at 23 °C	%	ISO 62	0.3
C Water absorption (equilibrium value)	23 °C; 50 % r. h.	%	ISO 62	0.12
C Density		kg/m³	ISO 1183-1	1180
Material specific properties				
Refractive index	Procedure A	-	ISO 489	1.578
Luminous transmittance (clear transparent materials)	1 mm	%	ISO 13468-2	89





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Property	Test Condition	Unit	Standard	typical Value
Processing conditions for test specimens				
C Injection molding-Melt temperature		°C	ISO 294	330
C Injection molding-Mold temperature		°C	ISO 294	100
C Injection molding-Injection velocity		mm/s	ISO 294	200

C These property characteristics are taken from the CAMPUS plastics data bank and are based on the international catalogue of basic data for plastics according to ISO 10350.

Impact properties: N = non-break, P = partial break, C = complete break

