



Apec DP1-9354

Flame retardant grades / Non reinforced

Developmental product, flame retardant: V-0/1,5mm (UL 94), V-0/3,0mm (UL 94), 5VA/3mm (UL 94), softening temperature (VST/B 120)=185 °C, only opaque colours available

ISO Shortname

Property	Test Condition	Unit	Standard	Value
Rheological properties				
C Melt volume-flow rate	330 °C; 2.16 kg	cm ³ /(10 min)	ISO 1133	10
Melt mass-flow rate	330 °C; 2.16 kg	g/(10 min)	ISO 1133	10
C Molding shrinkage, parallel	60x60x2	%	ISO 294-4	0.85
C Molding shrinkage, normal	60x60x2	%	ISO 294-4	0.85
Mechanical properties (23 °C/50 % r.h.)				
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	2300
C Yield stress	50 mm/min	MPa	ISO 527-1,-2	65
C Yield strain	50 mm/min	%	ISO 527-1,-2	7.0
C Nominal strain at break	50 mm/min	%	ISO 527-1,-2	50
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	N
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	N
C Charpy notched impact strength	23 °C	kJ/m ²	ISO 179-1eA	8.0
C Charpy notched impact strength	-30 °C	kJ/m ²	ISO 179-1eA	8.0
Flexural modulus	2 mm/min	MPa	ISO 178	2200
Flexural strength	2 mm/min	MPa	ISO 178	95
Ball indentation hardness		N/mm ²	ISO 2039-1	115
Thermal properties				
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	162
Temperature of deflection under load, annealed	1.80 MPa	°C	ISO 75-1,-2	175
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	174
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	185
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.7
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.7
C Burning behavior UL 94 (1.6 mm) [UL listed]	1.5 mm	Class	UL 94	V0
C Burning behavior UL 94 [UL listed]	3.0 mm	Class	UL 94	V0, 5VA
C Oxygen index	Method A	%	ISO 4589-2	35
Electrical properties (23 °C/50 % r.h.)				
C Relative permittivity	100 Hz	-	IEC 60250	2.9
C Relative permittivity	1 MHz	-	IEC 60250	2.9
C Dissipation factor	100 Hz	10 ⁻⁴	IEC 60250	18
C Dissipation factor	1 MHz	10 ⁻⁴	IEC 60250	80
C Volume resistivity		Ohm·m	IEC 60093	1E14
C Surface resistivity		Ohm	IEC 60093	4E15
C Electric strength	1 mm	kV/mm	IEC 60243-1	30
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	225
Comparative tracking index CTI M	Solution B	Rating	IEC 60112	<100 M
Electrolytic corrosion		Rating	IEC 60426	A1
Other properties (23 °C)				
C Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	0.4
C Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	0.2
C Density		kg/m ³	ISO 1183	1150
Material specific properties				
Refractive index	Procedure A	-	ISO 489	-
Luminous transmittance (clear transparent materials)	1 mm	%	ISO 13468-2	-
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

