

Product Texts

PC1003R resin is a medium-low flow (MFR = 10 at 300°C/1.2kg), heat and UV stabilized, polycarbonate product with mold release designed for use in the general purpose molding market. It is available exclusively at www.sabicpc.com

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	9	cm ³ /10min	ISO 1133
Temperature	300	°C	-
Load	1.2	kg	-
ASTM Data			
Melt Flow Index, MFI	10	g/10min	ASTM D 1238
Temperature	300	°C	-
Load	1.2	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2350	MPa	ISO 527
Yield stress	63	MPa	ISO 527
Yield strain	6	%	ISO 527
Strain at break	50	%	ISO 527
Flexural modulus	2300	MPa	ISO 178
Rockwell hardness	R 120	-	ISO 2039-2
ASTM Data			
Tensile Modulus	2350	MPa	ASTM D 638
Tensile Strength at Yield	63	MPa	ASTM D 638
Elongation at Yield	6	%	ASTM D 638
Elongation at Break	70	%	ASTM D 638
Flexural Modulus	2300	MPa	ASTM D 790
Rockwell Hardness	R 120	-	ASTM D 785
Izod Impact notched, 1/8 in	800	J/m	ASTM D 256
Izod Impact unnotched, 1/8 in	N	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	127	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	138	°C	ISO 75-1/-2
Vicat softening temperature, B	143	°C	ISO 306
Burning behav. at 1.5 mm nom. thickn.	V-2	class	IEC 60695-11-10
Thickness tested	1.6	mm	-
Thermal Conductivity	0.2	W/(m K)	DIN 52616
ASTM Data			
DTUL @ 66 psi	138	°C	ASTM D 648
DTUL @ 264 psi	127	°C	ASTM D 648
Vicat Temperature	143	°C	ASTM D 1525
Thermal Conductivity, solid state	0.0288	W/(m K)	ASTM C 177

Electrical properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 1MHz	3	-	IEC 62631-2-1
Dissipation factor, 100Hz	10	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	100	E-4	IEC 62631-2-1
Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1
Electric strength	27	kV/mm	IEC 60243-1
ASTM Data			
Dielectric Strength, Short Time	27	kV/mm	ASTM D 149
Dissipation Factor, 60 Hz	0.001	-	ASTM D 150
Dissipation Factor, 1 MHz	0.01	-	ASTM D 150
Dielectric Constant, 60 Hz	3	-	ASTM D 150
Dielectric Constant, 1 MHz	3	-	ASTM D 150

Volume Resistivity	1E15	Ohm*cm	ASTM D 257
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Optical properties	Value	Unit	Test Standard
ASTM Data			
Haze	0.8	%	ASTM D 1003
Light Transmittance	90	%	ASTM D 1003
Index of Refraction	1.59	-	ASTM D 542

Other properties	Value	Unit	Test Standard
Water absorption	0.35	%	Sim. to ISO 62
Density	1200	kg/m ³	ISO 1183
Water Absorption, Equilibrium	0.35	%	ASTM D 570
Density	1200	kg/m ³	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	≤120	°C	-
Pre-drying - Time	2 - 4	h	-
Melt temperature	280 - 310	°C	-
Mold temperature	80 - 110	°C	-
Zone 1	260 - 280	°C	-
Zone 2	270 - 290	°C	-
Zone 3	280 - 310	°C	-
Nozzle temperature	270 - 290	°C	-

Characteristics

Special Characteristics

U.V. stabilized or stable to weather