

Apec® 2045 PC

Covestro Deutschland AG

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	8	cm³/10min	ISO 1133
Temperature	330	°C	-
Load	2.16	kg	-
Molding shrinkage, parallel	1.1	%	ISO 294-4, 2577
Molding shrinkage, normal	1.1	%	ISO 294-4, 2577
Melt Flow Index, MFI	8	g/10min	ISO 1133
MFI temperature	330	°C	-
MFI load	2.16	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2400	MPa	ISO 527
Yield stress	75	MPa	ISO 527
Yield strain	6.8	%	ISO 527
Nominal strain at break	>50	%	ISO 527
Impact Strength (Charpy), +23°C	no break	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	no break	kJ/m²	ISO 179/1eU
Puncture - maximum force, +23°C	5000	N	ISO 6603-2
Puncture - maximum force, -30°C	5500	N	ISO 6603-2
Puncture energy, +23°C	50	J	ISO 6603-2
Puncture energy, -30°C	58	J	ISO 6603-2
Flexural Modulus (23°C)	2450	MPa	ISO 178
Flexural strength	110	MPa	ISO 178
Ball Indentation Hardness	130	MPa	ISO 2039-1

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	173	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	192	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	203	°C	ISO 306
Coeff. of Linear Therm. Expansion, parallel	65	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	65	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm Nom. Thickn.	HB	class	UL 94
Thickness tested	1.5	mm	-
Burning Behav. at thickness h	HB	class	UL 94
Thickness tested	3.0	mm	-

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	2.9	-	IEC 62631-2-1
Relative permittivity, 1MHz	2.8	-	IEC 62631-2-1
Dissipation Factor, 100Hz	10	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	90	E-4	IEC 62631-2-1
Volume Resistivity	1E15	Ohm*m	IEC 62631-3-1
Surface Resistivity	1E16	Ohm	IEC 62631-3-2
Electric Strength	35	kV/mm	IEC 60243-1

Other Properties	Value	Unit	Test Standard
ISO Data			
Water Absorption	0.3	%	Sim. to ISO 62
Humidity absorption	0.12	%	Sim. to ISO 62
Density	1130	kg/m³	ISO 1183

Material Specific Properties	Value	Unit	Test Standard
ISO Data			
Luminous transmittance	90	%	ISO 13468-1, -2

Optical Properties	Value	Unit	Test Standard
ASTM Data			
Index of Refraction	1.57	-	ISO 489

Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	330	°C	ISO 294
Injection Molding, mold temperature	100	°C	ISO 294
Injection Molding, injection velocity	200	mm/s	ISO 294

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	130	°C	-
Pre-drying - Time	2 - 3	h	-
Processing humidity	≤0.02	%	-
Melt temperature	330 - 340	°C	-
Mold temperature	130 - 150	°C	-
Zone 1	295 - 305	°C	-
Zone 2	305 - 315	°C	-
Zone 3	315 - 325	°C	-
Nozzle temperature	325 - 335	°C	-
Back pressure	5 - 15	MPa	-

Characteristics

Processing

Injection Molding

Additives

Release agent

Special Characteristics

Heat aging stabilized, Sterilizable, Steam sterilization

Certifications

Medical, Biocompatibility ISO 10993, US Pharmacopeia Class VI
Approved

Applications

Medical

Disclaimer

Liability Exclusion

These guide values are measured and provided by the product manufacturer and have been determined on standardised test specimens and can be affected by pigmentation, mould design and processing conditions. M-Base has taken the guide values from the producer's original Technical Data Sheet. **ALBIS AND M-BASE ARE THEREFORE NOT RESPONSIBLE FOR THE ACCURACY OF THE GUIDE VALUES AND CANNOT GIVE ANY WARRANTY WITH REGARD TO THEIR CORRECTNESS.**

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