

Apec® 1745 RE PC

Covestro Deutschland AG

- MVR (330 °C/2.16kg) 17 cm³/10 min
- easy release
- for superheated steam sterilization up to 143 °C
- meets criteria of US Pharmacopeia (USP) Class VI
- biocompatible according to many ISO 10993-1 test requirements
- softening temperature (VST/B 120)=170 °C
- Films for medical packaging
- Contact lens holders
- Medical vessels
- Safety valve for respiration aids
- Syringe tops

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	17	cm³/10min	ISO 1133
Temperature	330	°C	-
Load	2.16	kg	-
Molding shrinkage, parallel	0.8	%	ISO 294-4, 2577
Molding shrinkage, normal	0.8	%	ISO 294-4, 2577
Melt Flow Index, MFI	17	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	70	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
Flexural Modulus (23 °C)	2400	MPa	ISO 178
Ball Indentation Hardness	120	MPa	ISO 2039-1

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	148	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	161	°C	ISO 75-1/-2
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	-
Oxygen index	25	%	ISO 4589-1/-2
Glow Wire (GWFI, Flammability Index)	850	°C	IEC 60695-2-12
GWFI - thickness tested (1)	2	mm	-

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	3	-	IEC 62631-2-1
Relative permittivity, 1MHz	2.9	-	IEC 62631-2-1
Dissipation Factor, 100Hz	10	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	80	E-4	IEC 62631-2-1
Volume Resistivity	>1E13	Ohm*m	IEC 62631-3-1
Surface Resistivity	>1E15	Ohm	IEC 62631-3-2
Electric Strength	35	kV/mm	IEC 60243-1
Comparative tracking index	250	-	IEC 60112

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	1170	kg/m³	ISO 1183

Optical Properties	Value	Unit	Test Standard
ASTM Data			
Index of Refraction	1.58	-	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	320 - 340	°C	-
Mold temperature	110 - 130	°C	-
Zone 1	290 - 300	°C	-
Zone 2	300 - 310	°C	-
Zone 3	310 - 320	°C	-
Nozzle temperature	320 - 330	°C	-
Back pressure	5 - 15	MPa	-

Characteristics

Processing

Injection Molding

Additives

Release agent

Special Characteristics

Heat aging stabilized, Transparent, Sterilizable, Steam sterilization

Certifications

Contains renewable resources, Medical, Biocompatibility ISO 10993, US Pharmacopeia Class VI Approved, ISCC Plus

Applications

Medical, Packaging

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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