Apec® 1745

PC — Covestro Deutschland AG

Product Texts

- MVR (330°C/2.16kg) 17 cm³/10 min
- easy release
- suitable for superheated steam sterilisation up to 143 °C as well as for pharmaceutical applications according to United States Pharmacopeia (USP) XXII Class VI
- softening temperature (VST/B 120)=170 °C
- Films for medical packaging
- Contact lens holders
- Medical vessels
- Safety valve for respiration aids
- Syringe tops

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
[C] Melt volume-flow rate, MVR	**17**	cm³/10min	ISO 1133
Temperature	**330**	°C	-
Load	**2.16**	kg	-
[C] Molding shrinkage, parallel	**0.8**	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**0.8**	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**2400**	MPa	ISO 527
[C] Yield stress	**70**	MPa	ISO 527
[C] Yield strain	**6.8**	%	ISO 527
[C] Nominal strain at break	**>50**	%	ISO 527
[C] Charpy impact strength, +23°C	**N**	kJ/m²	ISO 179/1eU
[C] Charpy impact strength, -30°C	**N**	kJ/m²	ISO 179/1eU

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
ISO Data			
[C] Temp. of deflection under load, 1.80 MPa	**148**	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	**160**	°C	ISO 75-1/-2
[C] Coeff. of linear therm. expansion, parallel	**65**	E-6/K	ISO 11359-1/-2
[C] Coeff. of linear therm. expansion, normal	**65**	E-6/K	ISO 11359-1/-2
[C] Burning Behav. at 1.5 mm nom. thickn.	**HB**	class	IEC 60695-11-10
Thickness tested	**1.5**	mm	-
[C] Oxygen index	**25**	%	ISO 4589-1/-2

[C]: CAMPUS

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

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
[C] Water absorption	**0.3**	%	Sim. to ISO 62
[C] Humidity absorption	**0.12**	%	Sim. to ISO 62
[C] Density	**1170**	kg/m³	ISO 1183

[C]: CAMPUS

Test specimen production	Value	Unit	Test Standard
ISO Data			
[C] 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

[C]: CAMPUS

Characteristics

Processing
Injection Molding, Film Extrusion, Profile Extrusion, Sheet Extrusion

Delivery form
Pellets

Additives
Release agent

Special Characteristics
Transparent, Sterilizable, Ethylene Oxide (EtO) Sterilization, Steam sterilization, Gamma irradiation sterilization

Certifications
Medical Grade, US Pharmacopeia Class VI Approved

Applications
Medical

Regional Availability
North America, Europe, Asia Pacific, South and Central America, Near East/Africa

Other text information

Injection molding
PREPROCESSING
Max. Water content: 0.02 %
Drying temperature: 130 °C
Drying time:
Circulating air drying oven (50 % fresh air) 4-12 h
Fresh air dryer (high speed dryer) 2-4 h
Dry air dryer 2-3 h

PROCESSING
Melt temperature: 320-340 °C
Mold temperature: 110-130 °C

Use open nozzle.