Makrolon® 3208

PC — Covestro Deutschland AG

Product Texts

- MVR (300 °C/1.2 kg) 5.0 cm³/10 min
- medical devices
- suitable for ETO and steam sterilization at 121 °C
- biocompatible according to many ISO 10993-1 test requirements
- high viscosity

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
[C] Melt volume-flow rate, MVR	**5**	cm³/10min	ISO 1133
Temperature	**300**	°C	-
Load	**1.2**	kg	-
[C] Molding shrinkage, parallel	**0.7**	%	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	**2350**	MPa	ISO 527
[C] Yield stress	**65**	MPa	ISO 527
[C] Yield strain	**6.3**	%	ISO 527
[C] Nominal strain at break	**>50**	%	ISO 527
[C] Tensile creep modulus, 1h	**2200**	MPa	ISO 899-1
[C] Tensile creep modulus, 1000h	**1900**	MPa	ISO 899-1
[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] Puncture - maximum force, +23°C	**5800**	N	ISO 6603-2
[C] Puncture - maximum force, -30°C	**6700**	N	ISO 6603-2
[C] Puncture energy, +23°C	**65**	J	ISO 6603-2
[C] Puncture energy, -30°C	**75**	J	ISO 6603-2

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
ISO Data			
[C] Glass transition temperature, 10°C/min	**150**	°C	ISO 11357-1/-2
[C] Temp. of deflection under load, 1.80 MPa	**130**	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	**142**	°C	ISO 75-1/-2
[C] Vicat softening temperature, B	**150**	°C	ISO 306
[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] Oxygen index	**27**	%	ISO 4589-1/-2

[C]: CAMPUS

Optical properties	Value	Unit	Test Standard
ISO Data			
[C] Luminous transmittance	**89**	%	ISO 13468-1, -2

[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	**1200**	kg/m³	ISO 1183

[C]: CAMPUS

Test specimen production	Value	Unit	Test Standard
ISO Data			
[C] Injection Molding, melt temperature	**310**	°C	ISO 294
Injection Molding, mold temperature	**90**	°C	ISO 294

Injection Molding, injection velocity	**200**	mm/s	ISO 294

[C]: CAMPUS

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	**120**	°C	-
Pre-drying - Time	**2 - 3**	h	-
Processing humidity	**≤0.02**	%	-
Melt temperature	**280 - 320**	°C	-
Mold temperature	**80 - 100**	°C	-

Characteristics

Processing
Injection Molding, Other Extrusion, Blow Molding

Certifications
Medical Grade, Biocompatibility ISO 10993

Delivery form
Pellets

Applications
Medical

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

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

Other text information

Injection molding
PREPROCESSING
Max. Water content: 0.01 - 0.02 %
Drying temperature: 120 °C
Drying time:
Circulating air drying oven (50 % fresh air) 4-8 h
Fresh air dryer (high speed dryer) 2-4 h
Dry air dryer 2-3 h

PROCESSING
Melt temperature: 280-320 °C
Mold temperature: 80-100 °C

Use open nozzle.