

Makrolon® 3638

PC

Covestro Deutschland AG

- MVR (300 °C/1.2 kg) 2.0 cm³/10 min
- high viscosity
- food contact quality
- biocompatible according to many ISO 10993-1 test requirements
- pharmaceutical applications
- medical devices

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	2	cm³/10min	ISO 1133
Temperature	300	°C	-
Load	1.2	kg	-
Molding shrinkage, parallel	0.8	%	ISO 294-4, 2577
Molding shrinkage, normal	0.8	%	ISO 294-4, 2577
Melt Flow Index, MFI	2.5	g/10min	ISO 1133
MFI temperature	300	°C	-
MFI load	1.2	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2300	MPa	ISO 527
Yield stress	64	MPa	ISO 527
Yield strain	6.6	%	ISO 527
Nominal strain at break	>50	%	ISO 527
Impact Strength (Charpy), +23 °C	no break	kJ/m²	ISO 179/1eU
Puncture - maximum force, +23 °C	5500	N	ISO 6603-2
Puncture - maximum force, -30 °C	6400	N	ISO 6603-2
Puncture energy, +23 °C	55	J	ISO 6603-2
Puncture energy, -30 °C	60	J	ISO 6603-2
Flexural Modulus (23 °C)	2300	MPa	ISO 178
Flexural strength	94	MPa	ISO 178
Notched Impact Strength (Izod), 23 °C	65	kJ/m²	ISO 180/1A
Notched Impact Strength (Izod)	55	kJ/m²	ISO 180/1A
Temperature	-30	°C	-
Ball Indentation Hardness	108	MPa	ISO 2039-1

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Glass Transition Temperature (10 °C/min)	152	°C	ISO 11357-1/-2
Temp. of deflection under load (1.80 MPa)	132	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	145	°C	ISO 75-1/-2
Vicat softening temperature, 50 °C/h 50N	150	°C	ISO 306
Coeff. of Linear Therm. Expansion, parallel	70	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	70	E-6/K	ISO 11359-1/-2
Oxygen index	26	%	ISO 4589-1/-2

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	1200	kg/m³	ISO 1183
Bulk density	660	kg/m³	-

Test specimen production	Value	Unit	Test Standard
ISO Data			
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

Characteristics

Processing

Injection Molding, Blow Molding

Delivery form

Pellets

Special Characteristics

Transparent, Sterilizable

Certifications

Medical, Biocompatibility ISO 10993, US Pharmacopeia Class VI
Approved, Food approval

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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