

Makrolon® LED5102

PC

Covestro Deutschland AG

- MVR (300 °C/1.2 kg) 34 cm³/10 min
- low viscosity
- UV stabilized
- easy release
- high optical transmittance
- LED Lighting, optics and lenses

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	34	cm³/10min	ISO 1133
Temperature	300	°C	-
Load	1.2	kg	-
Molding shrinkage, parallel	0.7	%	ISO 294-4, 2577
Molding shrinkage, normal	0.7	%	ISO 294-4, 2577

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2400	MPa	ISO 527
Yield stress	63	MPa	ISO 527
Yield strain	6	%	ISO 527
Impact Strength (Charpy), +23°C	no break	kJ/m²	ISO 179/1eU
Puncture - maximum force, +23°C	4900	N	ISO 6603-2
Puncture - maximum force, -30°C	5900	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)	2350	MPa	ISO 178
Flexural strength	97	MPa	ISO 178
Notched Impact Strength (Izod), 23°C	55	kJ/m²	ISO 180/1A
Notched Impact Strength (Izod)	12	kJ/m²	ISO 180/1A
Temperature	-30	°C	-

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	123	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	136	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	143	°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 thickness h	V-2	class	UL 94
Thickness tested	0.8	mm	-

Other Properties	Value	Unit	Test Standard
ISO Data			
Density	1190	kg/m³	ISO 1183

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

Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	280	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 294
Injection Molding, injection velocity	200	mm/s	ISO 294

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	120	°C	-
Pre-drying - Time	4	h	-
Processing humidity	≤0.02	%	-
Melt temperature	250 - 300	°C	-
Mold temperature	70 - 110	°C	-

Zone 1	230 - 240	°C	-
Zone 2	250 - 260	°C	-
Zone 3	260 - 270	°C	-
Nozzle temperature	260 - 270	°C	-
Back pressure	10 - 20	MPa	-

Characteristics

Processing

Injection Molding

Special Characteristics

UV stabilized, Transparent

Additives

Release agent

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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