



Makrolon® 1881

PC

Covestro Deutschland AG

- Formerly Makrolon DP1-1881
- MVR (300 °C/1.2 kg) 19 cm³/10 min
- impact modified
- improved ultrasonic weldability
- low viscosity
- UV stabilized
- easy release
- available in opaque colors only

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	19	cm ³ /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	2300	MPa	ISO 527
Yield stress	60	MPa	ISO 527
Yield strain	5.8	%	ISO 527
Nominal strain at break	>50	%	ISO 527
Impact Strength (Charpy), +23 °C	no break	kJ/m ²	ISO 179/1eU
Impact Strength (Charpy), -30 °C	no break	kJ/m ²	ISO 179/1eU
Puncture - maximum force, +23 °C	4900	N	ISO 6603-2
Puncture - maximum force, -30 °C	5800	N	ISO 6603-2
Puncture energy, +23 °C	50	J	ISO 6603-2
Puncture energy, -30 °C	55	J	ISO 6603-2

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	144	°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
Oxygen index	30	%	ISO 4589-1/-2

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	3.1	-	IEC 62631-2-1
Relative permittivity, 1MHz	3	-	IEC 62631-2-1
Dissipation Factor, 100Hz	10	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	105	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	34	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	1200	kg/m ³	ISO 1183

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

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Characteristics

Processing

Injection Molding

Special Characteristics

Light stabilized or stable to light, UV stablized, Opaque

Delivery form

Pellets

Features

Weldable

Additives

Release agent

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.
