Makrolon® DQ5142

PC

Covestro Deutschland AG

- MVR (300 °C/1.2 kg) 34 cm³/10 min
- light diffusion grade
- medium diffusion
- low viscosity
- UV stabilized
- easy release

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	2300	MPa	ISO 527
Yield stress	65	MPa	ISO 527
Yield strain	6	%	ISO 527
Nominal strain at break	>50	%	ISO 527
Impact Strength (Charpy), +23°C	no break	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°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	44	J	ISO 6603-2
Puncture energy, -30°C	50	J	ISO 6603-2
Ball Indentation Hardness	120	MPa	ISO 2039-1

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	120	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	134	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	140	°C	ISO 306
Burning Behav. at thickness h	V-2	class	UL 94
Thickness tested	0.8	mm	-
Glow Wire (GWFI, Flammability Index)	850	°C	IEC 60695-2-12
GWFI - thickness tested (1)	0.75	mm	-
Glow Wire (GWFI, Flammability Index)	850	°C	IEC 60695-2-12
GWFI - thickness tested (2)	1.5	mm	-
Glow Wire (GWFI, Flammability Index)	930	°C	IEC 60695-2-12
GWFI - thickness tested (3)	3	mm	-
Glow Wire Ignition Temperature)	850	°C	IEC 60695-2-13
GWIT - thickness tested (1)	0.75	mm	-
Glow Wire Ignition Temperature)	850	°C	IEC 60695-2-13
GWIT - thickness tested (2)	1.5	mm	-
Glow Wire Ignition Temperature)	850	°C	IEC 60695-2-13
GWIT - thickness tested (3)	3	mm	-

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

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	2 - 3	h	-
Processing humidity	≤0.02	%	-
Melt temperature	250 - 300	°C	-
Mold temperature	80 - 120	°C	-
Zone 1	230 - 240	°C	-
Zone 2	250 - 260	°C	-
Zone 3	260 - 270	°C	-
Nozzle temperature	260 - 270	°C	-
Back pressure	5 - 15	MPa	-

Characteristics

Processing
Injection Molding

Special Characteristics
UV stablized, Transparent, Translucent

Additives
Release agent

Features
Light Diffusing

Disclaimer