

Makrolon® DQ5142 RE

PC

Covestro Deutschland AG

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
Stress at Break	60	MPa	ISO 527
Strain at Break	110	%	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	-
UL recognition	yes	-	-
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

Film Properties	Value	Unit	Test Standard
ISO Data			
Haze	100	-	ISO 14782

Material Specific Properties	Value	Unit	Test Standard
ISO Data			
Luminous transmittance	80	%	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	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

Features

Light Diffusing

Additives

Release agent

Certifications

Contains renewable resources, ISCC Plus

Special Characteristics

UV stabilized, Translucent

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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