

Makrolon® AX2677

Polycarbonate

Covestro - Polycarbonates

Message:

MVR (300 °C/1.2 kg) 12 cm³/10 min; medium viscosity; easy release; UV stabilized; injection molding - melt temperature 280 - 320 °C; available in black colors only; automotive exterior roof trim + pillar appliques; optimized and especially suitable for high-gloss surfaces with highest requirements "Piano-black"; tailored for the use in combination with Polysiloxan coatings

General Information			
Additive	UV stabilizer		
Features	Highlight		
	Good demoulding performance		
	Medium viscosity		
Uses	Application in Automobile Field		
	Automotive exterior parts		
	Car exterior decoration		
RoHS Compliance	RoHS compliance		
Appearance	Black		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.20	g/cm ³	ISO 1183
Apparent Density ¹	0.66	g/cm ³	ISO 60
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	13	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	12.0	cm ³ /10min	ISO 1133
Molding Shrinkage			
Transverse flow	0.60 - 0.80	%	ISO 2577
Flow	0.60 - 0.80	%	ISO 2577
Transverse flow: 2.00mm ²	0.75	%	ISO 294-4
Flow: 2.00mm ³	0.70	%	ISO 294-4
Water Absorption			
Saturated, 23°C	0.30	%	ISO 62
Equilibrium, 23°C, 50% RH	0.12	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness	115	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	2400	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield, 23°C	65.0	MPa	ISO 527-2/50

Fracture, 23°C	69.0	MPa	ISO 527-2/50
Tensile Strain			ISO 527-2/50
Yield, 23°C	6.0	%	ISO 527-2/50
Fracture, 23°C	120	%	ISO 527-2/50
Nominal Tensile Strain at Break (23°C)	> 50	%	ISO 527-2/50
Flexural Modulus ⁴ (23°C)	2400	MPa	ISO 178
Flexural Stress ⁵			ISO 178
23°C	98.0	MPa	ISO 178
3.5% strain, 23°C	74.0	MPa	ISO 178
Flexural Strain at Flexural Strength ⁶ (23°C)	7.1	%	ISO 178
Application of Flame from Small Burner - Method K and F (2.00 mm)	K1, F1		DIN 53438-1, -3
Flash Ignition Temperature	480	°C	ASTM D1929
Self Ignition Temperature	550	°C	ASTM D1929
Combustion rate-US-FMVSS (> 1.00 mm)	passed		ISO 3795
Electrolytical Corrosion (23°C)	A1		IEC 60426
Films	Nominal Value	Unit	Test Method
Water Vapor Transmission Rate (23°C, 85% RH, 100 µm)	15	g/m ² /24 hr	ISO 15106-1
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁷			ISO 7391
-30°C, complete fracture	16	kJ/m ²	ISO 7391
23°C, local fracture	70	kJ/m ²	ISO 7391
Charpy Unnotched Impact Strength			ISO 179/1eU
-60°C	No Break		ISO 179/1eU
-30°C	No Break		ISO 179/1eU
23°C	No Break		ISO 179/1eU
Notched Izod Impact ⁸			ISO 7391
-30°C, complete fracture	15	kJ/m ²	ISO 7391
23°C, local fracture	70	kJ/m ²	ISO 7391
Multi-Axial Instrumented Impact Energy			ISO 6603-2
-30°C	60.0	J	ISO 6603-2
23°C	55.0	J	ISO 6603-2
Multi-Axial Instrumented Impact Peak Force			ISO 6603-2
-30°C	6100	N	ISO 6603-2
23°C	5200	N	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	135	°C	ISO 75-2/B
1.8 MPa, not annealed	123	°C	ISO 75-2/A
Glass Transition Temperature ⁹	142	°C	ISO 11357-2
Vicat Softening Temperature			

--	142	°C	ISO 306/B50
--	143	°C	ISO 306/B120
Ball Pressure Test (135°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			ISO 11359-2
Flow: 23 to 55°C	6.5E-5	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C	6.5E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity ¹⁰ (23°C)	0.20	W/m/K	ISO 8302
RTI Elec (1.5 mm)	125	°C	UL 746
RTI Imp (1.5 mm)	115	°C	UL 746
RTI (1.5 mm)	125	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+16	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+16	ohms·cm	IEC 60093
Dielectric Strength (23°C, 1.00 mm)	34	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
23°C, 100 Hz	3.10		IEC 60250
23°C, 1 MHz	3.00		IEC 60250
Dissipation Factor			IEC 60250
23°C, 100 Hz	5.0E-4		IEC 60250
23°C, 1 MHz	9.0E-3		IEC 60250
Comparative Tracking Index			IEC 60112
Solution a	250	V	IEC 60112
Solution B	125	V	IEC 60112
NOTE			
1.	Pellets		
2.	60x60x2 mm, 500 bar		
3.	60x60x2 mm, 500 bar		
4.	2.0 mm/min		
5.	2.0 mm/min		
6.	2 mm/min		
7.	Based on ISO 179-1eA, 3 mm		
8.	Based on ISO 180-A, 3 mm		
9.	10°C/min		
10.	Cross-flow		

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