Makrolon® Ai2695 ST

PC — Covestro Deutschland AG

Product Texts

- Automotive interior grade with specified sensor signal transparency
- MVR (300 °C/1.2 kg) 12 cm³/10 min
- medium viscosity
- easy release
- developed for high-gloss surfaces with highest requirements
- for the use in combination with hard coatings
- for high transmittance applications in the near-infrared range (NIR)

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
[C] Melt volume-flow rate, MVR	**12**	cm³/10min	ISO 1133
Temperature	**300**	°C	-
Load	**1.2**	kg	-
Melt flow index, MFI	**13**	g/10min	ISO 1133
Temperature	**300**	°C	-
Load	**1.2**	kg	-
[C] Molding shrinkage, parallel	**0.7**	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**0.8**	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**2400**	MPa	ISO 527
[C] Yield stress	**65**	MPa	ISO 527
[C] Yield strain	**6**	%	ISO 527
[C] Nominal strain at break	**>50**	%	ISO 527
Flexural modulus, 23°C	**2400**	MPa	ISO 178
Flexural strength	**98**	MPa	ISO 178
[C] Charpy impact strength, +23°C	**N**	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	**N**	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C, 3mm	**70**	kJ/m²	ISO 179/1eA
Type of failure	**P**	-	-
Charpy notched impact strength, -30°C, 3mm	**16**	kJ/m²	ISO 179/1eA
Type of failure	**C**	-	-
Izod notched impact strength, +23°C	**70**	kJ/m²	ISO 180/1A
Izod notched impact strength	**14**	kJ/m²	ISO 180/1A
Temperature	**-30**	°C	-
[C] Puncture - maximum force, +23°C	**5200**	N	ISO 6603-2
[C] Puncture - maximum force, -30°C	**6100**	N	ISO 6603-2
[C] Puncture energy, +23°C	**55**	J	ISO 6603-2
[C] Puncture energy, -30°C	**60**	J	ISO 6603-2
Ball indentation hardness	**115**	MPa	ISO 2039-1

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
ISO Data			
[C] Glass transition temperature, 10°C/min	**143**	°C	ISO 11357-1/-2
[C] Temp. of deflection under load, 1.80 MPa	**124**	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	**136**	°C	ISO 75-1/-2
[C] Vicat softening temperature, B	**143**	°C	ISO 306
[C] Coeff. of linear therm. expansion, parallel	**65**	E-6/K	ISO 11359-1/-2
[C] Coeff. of linear therm. expansion, normal	**65**	E-6/K	ISO 11359-1/-2
Glow Wire Flammability Index (GWFI)	**850**	°C	IEC 60695-2-12
GWFI - thickness tested (1)	**0.75**	mm	-
Glow Wire Flammability Index (GWFI)	**850**	°C	IEC 60695-2-12
GWFI - thickness tested (2)	**1.5**	mm	-
Glow Wire Flammability Index (GWFI)	**930**	°C	IEC 60695-2-12
GWFI - thickness tested (3)	**3**	mm	-

Glow Wire Ignition Temperature (GWIT)	**875**	°C	IEC 60695-2-13
GWIT - thickness tested (1)	**0.75**	mm	-
Glow Wire Ignition Temperature (GWIT)	**875**	°C	IEC 60695-2-13
GWIT - thickness tested (2)	**1.5**	mm	-
Glow Wire Ignition Temperature (GWIT)	**875**	°C	IEC 60695-2-13
GWIT - thickness tested (3)	**3**	mm	-

[C]: CAMPUS

Electrical properties	**Value**	**Unit**	**Test Standard**
ISO Data			
[C] Relative permittivity, 100Hz	**3.1**	-	IEC 62631-2-1
[C] Relative permittivity, 1MHz	**3**	-	IEC 62631-2-1
[C] Dissipation factor, 100Hz	**5**	E-4	IEC 62631-2-1
[C] Dissipation factor, 1MHz	**90**	E-4	IEC 62631-2-1
[C] Volume resistivity	**>1E13**	Ohm*m	IEC 62631-3-1
[C] Surface resistivity	**>1E15**	Ohm	IEC 62631-3-2
[C] Electric strength	**34**	kV/mm	IEC 60243-1
[C] Comparative tracking index	**250**	-	IEC 60112

[C]: CAMPUS

Optical properties	**Value**	**Unit**	**Test Standard**
ISO Data			
Luminous transmittance	**89**	%	ISO 13468-1, -2

Other properties	**Value**	**Unit**	**Test Standard**
[C] Water absorption	**0.3**	%	Sim. to ISO 62
[C] Humidity absorption	**0.12**	%	Sim. to ISO 62
[C] Density	**1200**	kg/m³	ISO 1183
Bulk density	**660**	kg/m³	-

[C]: CAMPUS

Film Properties	**Value**	**Unit**	**Test Standard**
ISO Data			
WVTR, 23°C/85%r.h.	**15**	g/(m²*d)	ISO 15106-1/-2
Thickness of specimen	**0.1**	mm	-

Test specimen production	**Value**	**Unit**	**Test Standard**
ISO Data			
[C] Injection Molding, melt temperature	**290**	°C	ISO 294
Injection Molding, mold temperature	**80**	°C	ISO 294
Injection Molding, injection velocity	**200**	mm/s	ISO 294

[C]: CAMPUS

Processing Recommendation Injection Molding	**Value**	**Unit**	**Test Standard**
Pre-drying - Temperature	**120**	°C	-
Pre-drying - Time	**4**	h	-
Processing humidity	**≤0.02**	%	-
Melt temperature	**280 - 320**	°C	-
Mold temperature	**70 - 110**	°C	-
Zone 1	**250 - 270**	°C	-
Zone 2	**270 - 290**	°C	-
Zone 3	**285 - 305**	°C	-
Nozzle temperature	**270 - 305**	°C	-
Back pressure	**5 - 15**	MPa	-

Characteristics

Processing
Injection Molding

Delivery form
Pellets, Black

Additives
Release agent

Features
High Gloss

Applications
Automotive

Regional Availability
North America, Europe, Asia Pacific, South and Central America, Near East/Africa