

Makrolon® Ai2215

Covestro - Polycarbonates - *Polycarbonate*

General Information

Product Description

MVR (300 °C/1.2 kg) 34 cm³/10 min; low viscosity; easy release; injection molding - melt temperature 280 - 320 °C; available in clear transparent colors; Automotive interior; developed for coated high-gloss surfaces

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Good Mold Release	• High Gloss	• Low Viscosity
Uses	• Automotive Applications	• Automotive Interior Parts	
Appearance	• Colors Available	• Translucent	
Processing Method	• Injection Molding		

Properties ¹

Physical	Nominal Value	Unit	Test Method
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	34	g/10 min	ISO 1133
Molding Shrinkage ²			ISO 294-4
Across Flow : 0.0787 in	0.70	%	
Flow : 0.0787 in	0.65	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73°F)	341000	psi	ISO 527-1/1
Tensile Stress (Yield, 73°F)	9140	psi	ISO 527-2/50
Tensile Stress (Break, 73°F)	8700	psi	ISO 527-2/50
Tensile Strain (Yield, 73°F)	6.0	%	ISO 527-2/50
Tensile Strain (Break, 73°F)	130	%	ISO 527-2/50
Nominal Tensile Strain at Break (73°F)	> 50	%	ISO 527-2/50
Flexural Modulus ³ (73°F)	341000	psi	ISO 178
Flexural Stress ³			ISO 178
73°F	14100	psi	
3.5% Strain, 73°F	10600	psi	
Flexural Strain at Flexural Strength ⁴ (73°F)	7.0	%	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	No Break		
73°F	No Break		
Notched Izod Impact Strength ⁵			ISO 180/A
-22°F, Complete Break	5.7	ft·lb/in ²	
73°F, Partial Break	26	ft·lb/in ²	
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness	16700	psi	ISO 2039-1
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	280	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	257	°F	ISO 75-2/A
Vicat Softening Temperature			
--	295	°F	ISO 306/B120
--	293	°F	ISO 306/B50
CLTE - Flow (73 to 131°F)	3.6E-5	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F)	3.6E-5	in/in/°F	ISO 11359-2



Processing Information

Injection	Nominal Value	Unit
Drying Temperature - Dry Air Dryer	248	°F
Drying Time - Dry Air Dryer	2.0 to 3.0	hr
Suggested Max Moisture	< 0.020	%
Suggested Shot Size	30 to 70	%
Rear Temperature	482 to 500	°F
Middle Temperature	518 to 536	°F
Front Temperature	536 to 554	°F
Nozzle Temperature	554 to 572	°F
Processing (Melt) Temp	536 to 608	°F
Mold Temperature	176 to 248	°F
Back Pressure	725 to 2180	psi
Vent Depth	9.8E-4 to 3.0E-3	in

Injection Notes

Hold Pressure (% of Injection Pressure): 50 - 75%
Peripheral Screw Speed: 0.05 - 0.2 m/s
Standard Melt Temperature: 300°C

Notes

- ¹ Typical properties: these are not to be construed as specifications.
- ² 60x60x2mm, 500 bar
- ³ 0.079 in/min
- ⁴ 2.0 mm/min
- ⁵ 3 mm

