

Makrolon® FR7087

 Covestro - Polycarbonates - *Polycarbonate*
General Information
Product Description

MVR (300°C/1.2 kg) 12 cm³/10 min; flame retardant; UL 94V-0/2.2 mm and 5VA/3.0 mm; medium viscosity; UV stabilized; easy release; injection molding - melt temperature 280 - 320°C; available in transparent and translucent colors; electrical/electronic

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East	• Europe	• North America
	• Asia Pacific	• Latin America	
Additive	• Flame Retardant	• UV Stabilizer	
Features	• Flame Retardant	• Medium Viscosity	
	• Good Mold Release	• UV Stabilized	
Uses	• Electrical/Electronic Applications		
RoHS Compliance	• RoHS Compliant		
Appearance	• Clear/Transparent	• Colors Available	• Translucent
Processing Method	• Injection Molding		
ISO Designation	• ISO 7391-PC,MFLR,(,)-18-9		

Properties ¹

Physical	Nominal Value	Unit	Test Method
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	12	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	12	cm³/10min	ISO 1133
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73°F)	363000	psi	ISO 527-1/1
Tensile Stress (Yield, 73°F)	10900	psi	ISO 527-2/50
Tensile Stress (Break, 73°F)	10900	psi	ISO 527-2/50
Tensile Strain (Yield, 73°F)	5.0	%	ISO 527-2/50
Tensile Strain (Break, 73°F)	100	%	ISO 527-2/50
Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength (73°F)	No Break		ISO 179/1eU
Notched Izod Impact Strength ²			ISO 180/A
-22°F, Complete Break	3.8	ft·lb/in²	
73°F, Complete Break	3.8	ft·lb/in²	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	244	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	223	°F	ISO 75-2/A
Vicat Softening Temperature			
--	255	°F	ISO 306/B120
--	253	°F	ISO 306/B50
RTI Elec (0.06 in)	257	°F	UL 746B
RTI Imp (0.06 in)	176	°F	UL 746B
RTI Str (0.06 in)	185	°F	UL 746B
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.06 in	V-2		
0.09 in	V-0		
0.12 in	5VA		
Glow Wire Flammability Index			IEC 60695-2-12
0.06 in	1760	°F	



0.09 in	1760 °F	
0.12 in	1760 °F	
Glow Wire Ignition Temperature		IEC 60695-2-13
0.06 in	1710 °F	
0.09 in	1710 °F	
0.12 in	1760 °F	
Optical	Nominal Value Unit	Test Method
Light Transmittance (118.1 mil)	88.0 %	ISO 13468-2
Haze (118.1 mil)	0.900 %	ISO 14782

Processing Information

Injection	Nominal Value Unit
Drying Temperature - Dry Air Dryer	248 °F
Drying Time - Dry Air Dryer	4.0 hr
Suggested Max Moisture	< 0.020 %
Suggested Shot Size	30 to 70 %
Rear Temperature	482 to 518 °F
Middle Temperature	518 to 554 °F
Front Temperature	545 to 581 °F
Nozzle Temperature	518 to 581 °F
Processing (Melt) Temp	536 to 608 °F
Mold Temperature	158 to 230 °F
Back Pressure	1450 to 2900 psi
Vent Depth	9.8E-4 to 3.0E-3 in

Injection Notes

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

Notes

¹ Typical properties: these are not to be construed as specifications.

² 3.0 mm

