

Bayer MaterialScience Makrolon® 2856 Polycarbonate

Categories: [Polymer](#); [Thermoplastic](#); [Polycarbonate \(PC\)](#); [Polycarbonate, Molded](#)

Material

Notes:

- ISO 7391-PC,MR,(,,-)09-9
- Global grade
- MVR (300 °C/1.2 kg) 9.5 cm³/10 min
- Food contact quality
- Medium viscosity
- Easy release
- Good hydrolysis resistance
- Injection molding - Melt temperature 280 - 320 °C
- Available in transparent
- translucent and opaque colors

Preprocessing

Max. Water content 0.02 %

Drying temperature 120 °C

Drying time

Circulating air drying oven (50 % fresh air) 4-12 h

Fresh air dryer (high speed dryer) 2-4 h

Dry air dryer 2-3 h

Processing

Melt temperature 280-320 °C

Mold temperature 80-120 °C

Preprocessing

Max. Water content 0.01 %

Drying temperature 120 °C

Drying time

Circulating air drying oven (50 % fresh air) 4-12 h


Fresh air dryer (high speed dryer) 2-4 h

Dry air dryer 2-3 h




Processing



Melt temperature 250-280 °C


Vendors: No vendors are listed for this material. Please [click here](#) if you are a supplier and would like information on how to add your listing to this material.

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in ³	ISO 1183
	1.02 g/cc	0.0368 lb/in ³	Melt
	@Temperature 300 °C	@Temperature 572 °F	
Water Absorption	0.30 %	0.30 %	Similar to ISO 62
Moisture Absorption at Equilibrium	0.12 %	0.12 %	Similar to ISO 62
Linear Mold Shrinkage, Flow	0.0070 cm/cm	0.0070 in/in	parallel; ISO 294-4,2577

Linear Mold Shrinkage, Transverse	0.0070 cm/cm	0.0070 in/in	ISO 294-4,2577
Melt Flow	9.7 g/10 min @Load 1.20 kg, Temperature 300 °C	9.7 g/10 min @Load 2.65 lb, Temperature 572 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	66.0 MPa	9570 psi	ISO 527-1/-2
Elongation at Break	>= 50 %	>= 50 %	Nominal; ISO 527-1/-2
Elongation at Yield	6.1 %	6.1 %	ISO 527-1/-2
Tensile Modulus	2.40 GPa	348 ksi	ISO 527-1/-2
Charpy Impact Unnotched	NB	NB	ISO 179/1eU
	NB	NB	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Impact	5400	5400	Puncture - maximum force (N); ISO 6603-2
	6300	6300	Puncture - maximum force (N); ISO 6603-2
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Puncture Energy	60.0 J	44.3 ft-lb	ISO 6603-2
	65.0 J	47.9 ft-lb	ISO 6603-2
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Tensile Creep Modulus, 1 hour	2200 MPa	319000 psi	ISO 899-1
Tensile Creep Modulus, 1000 hours	1900 MPa	276000 psi	ISO 899-1

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+13 ohm-cm	>= 1.00e+13 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	IEC 60093
Dielectric Constant 	3.0	3.0	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.1	3.1	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	34.0 kV/mm	864 kV/in	IEC 60243-1
Dissipation Factor 	0.00050	0.00050	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.0090	0.0090	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	250 V	250 V	IEC 60112

Thermal Properties	Metric	English	Comments
CTE, linear	65.0 µm/m-°C	36.1 µin/in-°F	parallel; ISO 11359-1/-2
CTE, linear, Transverse to Flow	65.0 µm/m-°C	36.1 µin/in-°F	ISO 11359-1/-2
Specific Heat Capacity	1.70 J/g-°C	0.406 BTU/lb-°F	Melt
Thermal Conductivity	0.173 W/m-K	1.20 BTU-in/hr-ft²-°F	Melt
Deflection Temperature at 0.46 MPa (66 psi)	137 °C	279 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	125 °C	257 °F	ISO 75-1/-2
Vicat Softening Point	145 °C	293 °F	50°C/h 50N; ISO 306
Glass Transition Temp, Tg	145 °C	293 °F	ISO 11357-1/-2
Flammability, UL94 	V-2	V-2	IEC 60695-11-10
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	V-2	V-2	IEC 60695-11-10
	@Thickness 2.40 mm	@Thickness 0.0945 in	
Oxygen Index	27 %	27 %	ISO 4589-1/-2

Optical Properties	Metric	English	Comments
Transmission, Visible	89 %	89 %	ISO 13468-1, -2

Processing Properties	Metric	English	Comments
Melt Temperature	280 - 320 °C	536 - 608 °F	
	300 °C	572 °F	Injection Molding; ISO 294
Mold Temperature	80.0 °C	176 °F	Injection Molding; ISO 10724
	80.0 - 120 °C	176 - 248 °F	
Ejection Temperature	130 °C	266 °F	
Injection Velocity	200 mm/sec	7.87 in/sec	ISO 294

Descriptive Properties

Availability	Asia Pacific Europe India Near East/Africa North America South and Central America
Eff. thermal diffusivity (m ² /s)	1E-07
Feature	Release agent
Form	Pellets
Process	Blow Molding Injection Molding
UL recognition	UL\1.5\ UL\h\

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