

Covestro Makrolon® 2407 MAS056 Polycarbonate




Categories: [Polymer](#); [Thermoplastic](#); [Polycarbonate \(PC\)](#); [Polycarbonate, Impact Modified](#); [Polycarbonate, Molded](#); [Polycarbonate, UV Stabilized](#)



Material Notes: MVR (300 °C/1.2 kg) 19 cm³/10 min; improved impact strength; low viscosity; UV stabilized; easy release; injection molding - melt temperature 280 - 320 °C; available in light colors only



As of 1 September 2015, Bayer MaterialScience was separated from Bayer AG and officially adopted its new name – Covestro.




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
Bulk Density	0.640 g/cc	0.0231 lb/in ³	pellets; ISO 60
Density	1.20 g/cc	0.0434 lb/in ³	ISO 1183-1
Moisture Absorption at Equilibrium	0.12 %	0.12 %	ISO 62, 50% RH
Water Absorption at Saturation	0.30 %	0.30 %	ISO 62
Linear Mold Shrinkage, Flow	0.0065 cm/cm @Thickness 2.00 mm	0.0065 in/in @Thickness 0.0787 in	60x60x2 mm; 500 bar; ISO 294-4
Linear Mold Shrinkage, Transverse	0.0070 cm/cm @Thickness 2.00 mm	0.0070 in/in @Thickness 0.0787 in	60x60x2 mm; 500 bar; ISO 294-4
Melt Flow	20 g/10 min @Load 1.20 kg, Temperature 300 °C	20 g/10 min @Load 2.65 lb, Temperature 572 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Puncture Resistance 	4900 N @Temperature 23.0 °C	1100 lb (f) @Temperature 73.4 °F	ISO 6603-2
	5800 N @Temperature -30.0 °C	1300 lb (f) @Temperature -22.0 °F	ISO 6603-2
Ball Indentation Hardness	113 MPa	16400 psi	ISO 2039-1
Tensile Strength at Break	65.0 MPa	9430 psi	50 mm/min; ISO 527-1,-2
Tensile Strength, Yield	62.0 MPa	8990 psi	50 mm/min; ISO 527-1,-2
Elongation at Break	>= 50 % 115 %	>= 50 % 115 %	Nominal, 50 mm/min; ISO 527-1,-2 50 mm/min; b.o. ISO 527-1,-2
Elongation at Yield	5.8 %	5.8 %	50 mm/min; ISO 527-1,-2
Tensile Modulus	2.40 GPa	348 ksi	1 mm/min; ISO 527-1,-2
Flexural Strength	93.0 MPa	13500 psi	2 mm/min; ISO 178
Flexural Yield Strength	72.0 MPa @Strain 3.50 %	10400 psi @Strain 3.50 %	2 mm/min; ISO 178
Flexural Modulus	2.40 GPa	348 ksi	2 mm/min; ISO 178
Flexural Strain at Yield	6.8 %	6.8 %	2 mm/min; ISO 178
Izod Impact, Notched (ISO) 	16.0 kJ/m ² @Thickness 3.00 mm, Temperature -30.0 °C	7.61 ft-lb/in ² @Thickness 0.118 in, Temperature -22.0 °F	complete break; b.o. ISO 180-A
	60.0 kJ/m ² @Thickness 3.00 mm, Temperature 23.0 °C	28.6 ft-lb/in ² @Thickness 0.118 in, Temperature 73.4 °F	partial break; b.o. ISO 180-A
Charpy Impact Unnotched 	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	ISO 179-1eU
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	ISO 179-1eU
	NB @Temperature -60.0 °C	NB @Temperature -76.0 °F	ISO 179-1eU

Charpy Impact, Notched 	1.50 J/cm ² @Thickness 3.00 mm, Temperature -30.0 °C	7.14 ft-lb/in ² @Thickness 0.118 in, Temperature -22.0 °F	complete break; ISO 7391/b.o. ISO 179-1eA
	6.00 J/cm ² @Thickness 3.00 mm, Temperature 23.0 °C	28.6 ft-lb/in ² @Thickness 0.118 in, Temperature 73.4 °F	partial break; ISO 7391/b.o. ISO 179-1eA
Puncture Energy 	50.0 J @Temperature 23.0 °C	36.9 ft-lb @Temperature 73.4 °F	ISO 6603-2
	55.0 J @Temperature -30.0 °C	40.6 ft-lb @Temperature -22.0 °F	ISO 6603-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	IEC 60093
Surface Resistance	1.00e+16 ohm	1.00e+16 ohm	IEC 60093
Dielectric Constant 	3.0 @Frequency 1.00e+6 Hz	3.0 @Frequency 1.00e+6 Hz	IEC 60250
	3.1 @Frequency 100 Hz	3.1 @Frequency 100 Hz	IEC 60250
Dielectric Strength	34.0 kV/mm @Thickness 1.00 mm	864 kV/in @Thickness 0.0394 in	IEC 60243-1
Dissipation Factor 	0.0010 @Frequency 100 Hz	0.0010 @Frequency 100 Hz	IEC 60250
	0.011 @Frequency 1.00e+6 Hz	0.011 @Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	125 V	125 V	CTI M; Solution B; IEC 60112
	250 V	250 V	Solution A; IEC 60112

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	65.0 µm/m-°C @Temperature 23.0 - 55.0 °C	36.1 µin/in-°F @Temperature 73.4 - 131 °F	ISO 11359-1,-2
CTE, linear, Transverse to Flow	65.0 µm/m-°C @Temperature 23.0 - 55.0 °C	36.1 µin/in-°F @Temperature 73.4 - 131 °F	ISO 11359-1,-2
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft ² -°F	cross-flow; ISO 8302
Hot Ball Pressure Test	136 °C	277 °F	IEC 60695-10-2
Deflection Temperature at 0.46 MPa (66 psi)	136 °C	277 °F	ISO 75-1,-2
Deflection Temperature at 1.8 MPa (264 psi)	123 °C	253 °F	ISO 75-1,-2
Vicat Softening Point 	143 °C @Load 5.10 kg	289 °F @Load 11.2 lb	50°C/h; ISO 306
	144 °C @Load 5.10 kg	291 °F @Load 11.2 lb	120°C/h; ISO 306
Flammability, UL94 	V-2 @Thickness 0.800 mm	V-2 @Thickness 0.0315 in	
	V-2 @Thickness 1.50 mm	V-2 @Thickness 0.0591 in	
	V-2 @Thickness 3.00 mm	V-2 @Thickness 0.118 in	
Flash Point	460 °C	860 °F	ASTM D 1929
	540 °C	1000 °F	self ignition; ASTM D 1929
Oxygen Index	30 %	30 %	Method A; ISO 4589-2
Glow Wire Ignition Temperature 	825 °C @Thickness 1.00 mm	1520 °F @Thickness 0.0394 in	IEC 60695-2-13
	825 °C @Thickness 1.50 mm	1520 °F @Thickness 0.0591 in	IEC 60695-2-13
	825 °C @Thickness 2.00 mm	1520 °F @Thickness 0.0787 in	IEC 60695-2-13
	850 °C @Thickness 3.00 mm	1560 °F @Thickness 0.118 in	IEC 60695-2-13
	850 °C @Thickness 4.00 mm	1560 °F @Thickness 0.157 in	IEC 60695-2-13

Glow Wire	800 °C	1470 °F	IEC 60695-2-12
Flammability Index 	@Thickness 1.00 mm	@Thickness 0.0394 in	
	800 °C	1470 °F	IEC 60695-2-12
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	850 °C	1560 °F	IEC 60695-2-12
	@Thickness 2.00 mm	@Thickness 0.0787 in	
	930 °C	1710 °F	IEC 60695-2-12
	@Thickness 3.00 mm	@Thickness 0.118 in	
	960 °C	1760 °F	IEC 60695-2-12
	@Thickness 4.00 mm	@Thickness 0.157 in	

Processing Properties	Metric	English	Comments
Melt Temperature	280 °C	536 °F	Injection molding; ISO 294
Mold Temperature	80.0 °C	176 °F	Injection molding; ISO 294
Injection Velocity	200 mm/sec	7.87 in/sec	ISO 294

Descriptive Properties

Electrolytic Corrosion	A1	IEC 60426
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