

Covestro Makrolon® T7855 Polycarbonate, Impact Grade

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Impact Modified

Material Notes:

ISO 7391-PC,MPR,(,,)-18-9Global gradeMVR (300 °C/1.2 kg) 12 cm3/10 minImpact modifiedMedium viscosityEasy releaseInjection molding - Melt temperature 280 - 320 °CAvailable in opaque colors onlyPreprocessingMax. Water content

Order this product through the following link:

http://www.lookpolymers.com/polymer_Covestro-Makrolon-T7855-Polycarbonate-Impact-Grade.php

Physical Properties	Metric	English	Comments
Density	1.19 g/cc	0.0430 lb/in³	ISO 1183
	1.02 g/cc	0.0368 lb/in³	Melt
	@Temperature 290 °C	@Temperature 554 °F	
Water Absorption	0.40 %	0.40 %	Similar to ISO 62
Moisture Absorption at Equilibrium	0.12 %	0.12 %	Similar to ISO 62
Melt Flow	12 g/10 min	12 g/10 min	ISO 1133
	@Load 1.20 kg, Temperature 300 °C	@Load 2.65 lb, Temperature 572 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	62.0 MPa	8990 psi	ISO 527-1/-2
Elongation at Break	>= 50 %	>= 50 %	Nominal; ISO 527-1/-2
Elongation at Yield	5.8 %	5.8 %	ISO 527-1/-2
Tensile Modulus	2.25 GPa	326 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	5100	5100	Puncture - maximum force (N); ISO 6603-2
	6000	6000	Puncture - maximum force (N); ISO 6603-2
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Puncture Energy	55.0 J	40.6 ft-lb	ISO 6603-2
	60.0 J	44.3 ft-lb	ISO 6603-2
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	38.9 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ISO 11359-1/-2
CTE, linear, Transverse to Flow	70.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	38.9 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ISO 11359-1/-2
Specific Heat Capacity	1.70 J/g- $^{\circ}\text{C}$	0.406 BTU/lb- $^{\circ}\text{F}$	Melt
Thermal Conductivity	0.173 W/m-K	1.20 BTU-in/hr-ft 2 - $^{\circ}\text{F}$	Melt
Deflection Temperature at 0.46 MPa (66 psi)	136 $^{\circ}\text{C}$	277 $^{\circ}\text{F}$	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	123 $^{\circ}\text{C}$	253 $^{\circ}\text{F}$	ISO 75-1/-2
Vicat Softening Point	144 $^{\circ}\text{C}$	291 $^{\circ}\text{F}$	50 $^{\circ}\text{C}/\text{h}$ 50N; ISO 306
Flammability, UL94	HB	HB	IEC 60695-11-10
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Oxygen Index	30 %	30 %	ISO 4589-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00\text{e}+13$ ohm-cm	$\geq 1.00\text{e}+13$ ohm-cm	IEC 60093
Surface Resistance	$\geq 1.00\text{e}+15$ ohm	$\geq 1.00\text{e}+15$ ohm	IEC 60093
Dielectric Constant	3.1	3.1	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.2	3.2	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	34.0 kV/mm	864 kV/in	IEC 60243-1
Dissipation Factor	0.0014	0.0014	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.011	0.011	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	200 V	200 V	IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	290 $^{\circ}\text{C}$	554 $^{\circ}\text{F}$	Injection Molding; ISO 294
	280 - 320 $^{\circ}\text{C}$	536 - 608 $^{\circ}\text{F}$	

Processing Properties	Metric	English	Comments
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	Value	Comments
Availability	Asia Pacific	
	Europe	
	India	
	Near East/Africa	
	North America	
	South and Central America	
Eff. thermal diffusivity (m²/s)	1E-07	
Feature	Release agent	
Form	Pellets	
Process	Injection Molding	

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