

## Styron EMERGE<sup>®</sup>,<sub>ç</sub> 8702 Polycarbonate

Category : Polymer , Thermoplastic , Polycarbonate (PC)

### Material Notes:

EMERGE<sup>®</sup>,<sub>ç</sub> PC 8702 advanced resin is an ignition-resistant, 20% glass reinforced, polycarbonate resin. This resin contains no bromide, chloride, or phosphate additives. It is a medium flow PC resin with a mold release system, intended for injection molding applications.

Applications: Information Technology Equipment Electrical Parts Other structural/internal parts Information provided by Dow This product line was spun off from Dow Chemical to Styron in 2010.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Styron-EMERGE-8702-Polycarbonate.php](http://www.lookpolymers.com/polymer_Styron-EMERGE-8702-Polycarbonate.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.33 g/cc	1.33 g/cc	ASTM D792
Linear Mold Shrinkage	0.0020 - 0.0040 cm/cm	0.0020 - 0.0040 in/in	ASTM D955
Melt Flow	5.0 g/10 min @Load 1.20 kg, Temperature 300 Â°C	5.0 g/10 min @Load 2.65 lb, Temperature 572 Â°F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	100 MPa	14500 psi	ASTM D638
Elongation at Break	4.0 %	4.0 %	ASTM D638
Tensile Modulus	6.00 GPa	870 ksi	ASTM D638
Flexural Strength	170.0 MPa	24650 psi	ASTM D790
Flexural Modulus	5.499 GPa	797.5 ksi	ASTM D790

Thermal Properties	Metric	English	Comments
CTE, linear	25.2 Âµm/m-Â°C @Temperature -40.0 - 82.2 Â°C	14.0 Âµin/in-Â°F @Temperature -40.0 - 180 Â°F	ASTM D696
CTE, linear, Transverse to Flow	52.2 Âµm/m-Â°C @Temperature -40.0 - 82.2 Â°C	29.0 Âµin/in-Â°F @Temperature -40.0 - 180 Â°F	ASTM D696
Hot Ball Pressure Test	>= 135 Â°C	>= 275 Â°F	IEC 60335-1
Deflection Temperature at 0.46 MPa (66 psi)	145 Â°C	293 Â°F	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	140 Â°C	284 Â°F	unannealed; ASTM D648

Thermal Properties	Metric 143 Â°C	English 289 Â°F	Comments annealed, ASTM D648
Vicat Softening Point	150 Â°C	302 Â°F	50Â°C/hr, 50N; ASTM D1525
	160 Â°C	320 Â°F	120Â°C/hr, 10N; ASTM D1525
Flammability, UL94	V-0 @Thickness 1.50 mm	V-0 @Thickness 0.0591 in	
Oxygen Index	35 %	35 %	ASTM D2863
Glow Wire Test	960 Â°C @Thickness 1.00 - 3.00 mm	1760 Â°F @Thickness 0.0394 - 0.118 in	IEC 60695-2-10

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+16 ohm-cm @Thickness 1.80 mm	1.00e+16 ohm-cm @Thickness 0.0709 in	ASTM D257
Surface Resistance	3.00e+14 ohm	3.00e+14 ohm	ASTM D257
Dielectric Constant	3.1 @Thickness 1.60 mm, Frequency 10.0 - 1.00e+6 Hz	3.1 @Thickness 0.0630 in, Frequency 10.0 - 1.00e+6 Hz	ASTM D150
Dielectric Strength	>= 27.2 kV/mm @Thickness 1.60 mm	>= 692 kV/in @Thickness 0.0630 in	ASTM D149
Dissipation Factor	0.0025 @Frequency 100 Hz	0.0025 @Frequency 100 Hz	ASTM D150
	0.0050 @Frequency 10 Hz	0.0050 @Frequency 10 Hz	ASTM D150
	0.016 @Frequency 1e+6 Hz	0.016 @Frequency 1e+6 Hz	ASTM D150
Comparative Tracking Index	175 V @Thickness 3.00 mm	175 V @Thickness 0.118 in	IEC 60112

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