



## EMERGE PC 4510-10

### Advanced Resin

EMERGE™ PC 4510-10 Advanced Resin is a general purpose, UL 94 V-2 listed polycarbonate resin designed for use in the Information Technology Equipment & Consumer Electronics industries. It provides ignition resistance, heat resistance and excellent toughness. This resin is available in a full range of colors that can be custom tailored to meet your product requirements.

### Applications

- Consumer electronics and information technology equipment
- Computer and business equipment
- Portable electronics

Physical Properties <sup>(1)</sup>	Test Method	English Units	SI Units
Specific Gravity	ASTM D 792	1.20	1.20
Melt Flow Rate, 300°C/1.2kg	ASTM D 1238	10 g/10min	10 g/10min
Mold Shrinkage, Linear Flow	ASTM D 955	0.005-0.007 in/in	0.005-0.007 mm/mm
Mechanical Properties <sup>(2)</sup>			
Tensile Strength at Yield	ASTM D 638	8,700 psi	60 MPa
Tensile Strength at Break	ASTM D 638	10,300 psi	71 MPa
Elongation at Break	ASTM D 638	150 %	150 %
Tensile Modulus	ASTM D 638	334,000 psi	2,300 MPa
Flexural Strength	ASTM D 790	14,000 psi	97 MPa
Flexural Modulus	ASTM D 790	350,000 psi	2,410 MPa
Unnotched Izod Impact, 73°F (23°C)	ASTM D 256	No break	No break
Notched Izod Impact, 73°F (23°C)	ASTM D 256	17 ft-lb/in	907 J/m
Thermal Properties			
Deflection Temperature Under Load <sup>(3)</sup>	ASTM D 648		
66 psi (0.45 MPa), annealed		286 °F	141 °C
264 psi (1.8 MPa), annealed		280 °F	138 °C
264 psi (1.8 MPa), unannealed		252 °F	122 °C
Vicat Softening Point, 50°C/hr, 50N	ASTM D 1525	295 °F	146 °C
Flammability <sup>(4)</sup>			
UL94 Classification at			
0.0625 in (1.6 mm)	UL94	V-2	V-2
0.125 in (3.2 mm)	UL94	V-2	V-2
Processing Conditions			
Drying Temperature, 3 to 4 hours		250 °F	121 °C
Melt Temperature		550-600 °F	288-316 °C
Mold Temperature		160-220 °F	71-104 °C

1. Typical properties; not to be construed as sales specifications. Fabrication conditions, part design, additives, processing aids, finishing materials, and use conditions can all affect the integrity, performance, and regulatory status of finished goods.
2. Tests conducted on 0.125 inch (3.2 mm) injection molded specimen, unannealed, unless noted.
3. 0.157 in (4.0 mm)
4. This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.

