

## EMERGE™ PC/ABS 7590 Advanced Resin

### Overview

EMERGE™ PC/ABS 7590 advanced resin is an ignition-resistant PC/ABS blend that contains no chlorine or bromine additives. Its superior processing makes it ideal for molding large parts and optimizing cycle time productivity in injection molding operations. It has a UL 94 flammability rating of V-0 at 1.5mm. This resin is suitable for use in a wide variety of applications in the information technology equipment and consumer electronics (ITE/CE) markets.

Main Characteristics:

- UL 94 V-0 at 1.5 mm
- Does not contain chlorine or bromine additives

Applications:

- TV, monitor and PC enclosures
- Adaptors and chargers

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.17 g/cm <sup>3</sup>	1.17 g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
230°C/3.8 kg	17 g/10 min	17 g/10 min	
260°C/5.0 kg	75 g/10 min	75 g/10 min	
Molding Shrinkage - Flow	4.0E-3 to 6.0E-3 in/in	0.40 to 0.60 %	ASTM D955
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength			ASTM D638
Yield, 0.126 in (3.20 mm), Injection Molded	9000 psi	62.1 MPa	
Break, 0.126 in (3.20 mm), Injection Molded	6700 psi	46.2 MPa	
Tensile Elongation			ASTM D638
Yield, 0.126 in (3.20 mm), Injection Molded	4.0 %	4.0 %	
Break, 0.126 in (3.20 mm), Injection Molded	50 %	50 %	
Flexural Modulus			ASTM D790
0.126 in (3.20 mm), Injection Molded	410000 psi	2830 MPa	
Flexural Strength			ASTM D790
0.126 in (3.20 mm), Injection Molded	14200 psi	97.9 MPa	
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact			ASTM D256
73°F (23°C), 0.126 in (3.20 mm), Injection Molded	12 ft-lb/in	640 J/m	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed	201 °F	93.9 °C	
264 psi (1.8 MPa), Unannealed	180 °F	82.2 °C	
Vicat Softening Temperature	227 °F	108 °C	ASTM D1525 <sup>1</sup>
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating <sup>2</sup> (0.06 in (1.5 mm))	V-0	V-0	UL 94
Oxygen Index <sup>2</sup>	29 %	29 %	ASTM D2863

<b>Injection</b>	<b>Nominal Value (English)</b>	<b>Nominal Value (SI)</b>
Drying Temperature	175 to 195 °F	79 to 91 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Processing (Melt) Temp	428 to 482 °F	220 to 250 °C
Mold Temperature	140 to 195 °F	60 to 91 °C