

EMERGE™ PC/ABS 7160ECO Advanced Resin

Overview

EMERGE™ ABS/PC 7160ECO advanced resin containing 30% post consumer recycled (PCR) materials and no chlorine or bromine additives. This resin uses the continuous mass ABS technology that achieves a property balance of impact strength, flowability, and ductility to meet the market needs of various thin-wall applications in information technology equipment (ITE) and consumer electronics without painting or coating.

Applications:

- Packaging for ITE
- Enclosures for electronic parts

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.14 g/cm ³	1.14 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
230°C/3.8 kg	5.5 g/10 min	5.5 g/10 min	
260°C/5.0 kg	31 g/10 min	31 g/10 min	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus ¹			ASTM D638
0.126 in (3.20 mm), Injection Molded	309000 psi	2130 MPa	
Tensile Strength ¹			ASTM D638
Yield, 0.126 in (3.20 mm), Injection Molded	6670 psi	46.0 MPa	
Break, 0.126 in (3.20 mm), Injection Molded	5510 psi	38.0 MPa	
Tensile Elongation ¹			ASTM D638
Yield, 0.126 in (3.20 mm), Injection Molded	2.5 %	2.5 %	
Flexural Modulus ²			ASTM D790
0.126 in (3.20 mm), Injection Molded	343000 psi	2370 MPa	
Flexural Strength ²			ASTM D790
0.126 in (3.20 mm), Injection Molded	10600 psi	73.0 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	10 ft·lb/in	550 J/m	
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness ³	106	106	ASTM D785
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed	203 °F	95.0 °C	
264 psi (1.8 MPa), Unannealed	176 °F	80.0 °C	
CLTE			ASTM D696
Flow : 77 to 167°F (25 to 75°C)	4.8E-5 to 4.9E-5 in/in/°F	8.6E-5 to 8.9E-5 cm/cm/°C	
Transverse : 77 to 167°F (25 to 75°C)	5.6E-5 to 5.9E-5 in/in/°F	1.0E-4 to 1.1E-4 cm/cm/°C	
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating			UL 94
0.04 in (1.0 mm)	HB	HB	
0.13 in (3.2 mm)	HB	HB	

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	176 °F	80 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Processing (Melt) Temp	464 to 500 °F	240 to 260 °C
Mold Temperature	140 to 194 °F	60 to 90 °C