

Technical Information



EMERGE™ PC/ABS 7100

Advanced Resin

Overview

EMERGE™ PC/ABS 7100 advanced resin exhibits a balance of properties between impact strength, heat resistance and processability. Its superior natural base color and lot-to-lot color consistency makes it ideally suited for producing very consistent colored parts. It has excellent flow and is ideal for injection molding in thin-wall applications, such as portable electronic devices.

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.11 g/cm ³	1.11 g/cm ³	ASTM D792 ISO 1183
Melt Mass-Flow Rate (MFR)			ASTM D1238 ISO 1133
230°C/3.8 kg	4.5 g/10 min	4.5 g/10 min	
260°C/5.0 kg	25 g/10 min	25 g/10 min	
Molding Shrinkage - Flow	5.0E-3 to 7.0E-3 in/in	0.50 to 0.70 %	ASTM D955
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus ¹	320000 psi	2210 MPa	ASTM D638
Tensile Strength ² (Yield)	7300 psi	50.3 MPa	ASTM D638
Tensile Elongation ²			ASTM D638
Yield	4.0 %	4.0 %	
Break	50 %	50 %	
Flexural Modulus	340000 psi	2340 MPa	ASTM D790
Flexural Strength	11600 psi	80.0 MPa	ASTM D790
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact			ASTM D256
-22°F (-30°C)	5.4 ft-lb/in	290 J/m	
73°F (23°C)	9.0 ft-lb/in	480 J/m	
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness (R-Scale)	112	112	ASTM D785
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed	241 °F	116 °C	
264 psi (1.8 MPa), Unannealed	203 °F	95.0 °C	
Vicat Softening Temperature	271 °F	133 °C	ASTM D1525 ³
CLTE - Flow (-40 to 176°F (-40 to 80°C))	4.2E-5 in/in/°F	7.6E-5 cm/cm/°C	ASTM D696
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ⁴ (0.04 in (1.0 mm))	HB	HB	UL 94
Injection	Nominal Value (English)	Nominal Value (SI)	
Drying Temperature	176 to 194 °F	80 to 90 °C	
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr	
Processing (Melt) Temp	464 to 554 °F	240 to 290 °C	
Mold Temperature	122 to 194 °F	50 to 90 °C	

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

¹ 0.039 in/min (1.0 mm/min)

² 2.0 in/min (50 mm/min)

³ Rate B (120°C/h), Loading 1 (10 N)

⁴ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.

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