

EMERGE™ PC 6900

Advanced Resin

Overview

EMERGE™ PC 6900 is a specially designed ignition-resistant polycarbonate alloy. It combines high flow, high heat and high strength together. It is especially suited for thin-wall applications and has excellent high gloss aesthetics. EMERGE PC 6900 has a UL94 V-0 rating at 1.0 mm. This material does not contain chlorine or bromine additives.

Main Characteristics:

- Ignition resistant
- High Flow
- High Gloss

Applications:

- Thin-Wall Powered Device Housings
- Consumer Electronics
- Information technology equipment
- Computer housings

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.19 g/cm ³	1.19 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	18 g/10 min	18 g/10 min	ASTM D1238
Molding Shrinkage - Flow	4.0E-3 to 7.0E-3 in/in	0.40 to 0.70 %	ASTM D955
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength			ASTM D638
Yield, 0.126 in (3.20 mm), Injection Molded	9430 psi	65.0 MPa	
Tensile Elongation			ASTM D638
Break, 0.126 in (3.20 mm), Injection Molded	70 %	70 %	
Flexural Modulus			ASTM D790
0.126 in (3.20 mm), Injection Molded	385000 psi	2650 MPa	
Flexural Strength			ASTM D790
0.126 in (3.20 mm), Injection Molded	14000 psi	96.5 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	2.8 ft-lb/in	150 J/m	
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness			ASTM D785
R-Scale, 0.126 in (3.20 mm), Injection Molded	123	123	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed	212 °F	100 °C	
264 psi (1.8 MPa), Unannealed	194 °F	90.0 °C	
Vicat Softening Temperature	241 °F	116 °C	ASTM D1525 ¹
CLTE - Flow	3.6E-5 in/in/°F	6.6E-5 cm/cm/°C	ASTM D696

Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ²			UL 94
0.020 in (0.50 mm)	V-2	V-2	
0.031 in (0.8 mm)	V-1	V-1	
0.04 in (1.0 mm)	V-0	V-0	
0.08 in (2.0 mm)	5VB	5VB	

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	195 to 215 °F	91 to 102 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Processing (Melt) Temp	430 to 500 °F	221 to 260 °C
Mold Temperature	160 to 215 °F	71 to 102 °C

Notes

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

¹ Rate B (120°C/h), Loading 1 (10 N)

² This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.



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