

Technical Information



EMERGE™ PC 4350-22 Advanced Resin

Overview

EMERGE™ PC 4350-22 Advanced Resin is a polycarbonate resin offering ultraviolet light stability, high heat resistance and maximum toughness. This UV stable resin is available in a full range of colors that can be customer tailored to meet your product requirements.

Applications:

- Appliances
- Outdoor applications
- Automotive components
- Consumer Electronic Enclosures
- Sensor Window
- Packaging

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.20 g/cm ³	1.20 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	22 g/10 min	22 g/10 min	ASTM D1238
Molding Shrinkage - Flow	5.0E-3 to 7.0E-3 in/in	0.50 to 0.70 %	ASTM D955 ISO 294-4
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus ¹	334000 psi	2300 MPa	ASTM D638
Tensile Strength ²			ASTM D638
Yield	8700 psi	60.0 MPa	
Break	9430 psi	65.0 MPa	
Tensile Elongation ²			ASTM D638
Yield	6.0 %	6.0 %	
Break	120 %	120 %	
Flexural Modulus ³	348000 psi	2400 MPa	ASTM D790
Flexural Strength ³	13800 psi	95.0 MPa	ASTM D790
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact (73°F (23°C))	13 ft-lb/in	700 J/m	ASTM D256
Instrumented Dart Impact 73°F (23°C), Total Energy	640 in-lb	72.3 J	ASTM D3763
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load 264 psi (1.8 MPa), Unannealed	257 °F	125 °C	ASTM D648
Vicat Softening Temperature	298 °F	148 °C	ASTM D1525 ⁴
CLTE - Flow (-40 to 176°F (-40 to 80°C))	3.6E-5 in/in/°F	6.5E-5 cm/cm/°C	ASTM D696
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Volume Resistivity			
--	1.0E+15 ohms-cm	1.0E+15 ohms-cm	ASTM D257
--	> 1.0E+15 ohms-cm	> 1.0E+15 ohms-cm	IEC 60093
Dielectric Strength	300 V/mil	12 kV/mm	ASTM D149
Arc Resistance	PLC 5	PLC 5	ASTM D495

Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating			UL 94
0.016 in (0.40 mm)	HB	HB	
0.020 in (0.50 mm)	V-2	V-2	
0.031 in (0.8 mm)	V-2	V-2	
0.06 in (1.6 mm)	V-2	V-2	
0.08 in (2.0 mm)	V-2	V-2	
0.10 in (2.5 mm)	V-2	V-2	
0.12 in (3.0 mm)	V-2	V-2	
Glow Wire Flammability Index			IEC 60695-2-12
0.08 in (2.0 mm)	1520 °F	825 °C	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.08 in (2.0 mm)	1560 °F	850 °C	
Injection	Nominal Value (English)	Nominal Value (SI)	
Drying Temperature	248 °F	120 °C	
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr	
Processing (Melt) Temp	518 to 554 °F	270 to 290 °C	
Mold Temperature	158 to 230 °F	70 to 110 °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 0.051 in/min (1.3 mm/min)

⁴ Rate B (120°C/h), Loading 1 (10 N)

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