

Technical Information



CALIBRE™ EV21 E50

Advanced Resin

Overview

CALIBRE™ EV21 E50 Advanced Resin is a developmental grade, ignition-resistance PC blends containing 50% post-consumer recycled(PCR) materials and contain no chlorine or bromine additives. The resin provides superior processability for molding thin-wall parts and optimize cycle time productivity in injection molding operations. CALIBRE™ EV21 E50 has a UL94 V-0 rating at 0.7 mm.

Applications:

- Cylindrical cell holder

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) (260°C/1.2 kg)	10 g/10 min	10 g/10 min	ASTM D1238
Molding Shrinkage - Flow	3.0E-3 to 7.0E-3 in/in	0.30 to 0.70 %	ASTM D955
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength ¹ (Yield)	9140 psi	63.0 MPa	ASTM D638
Tensile Elongation ¹			ASTM D638
Yield	3.8 %	3.8 %	
Break	100 %	100 %	
Flexural Modulus ²	384000 psi	2650 MPa	ASTM D790
Flexural Strength ²	13800 psi	95.0 MPa	ASTM D790
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact			ASTM D256
-22°F (-30°C)	2.8 ft-lb/in	150 J/m	
73°F (23°C)	11 ft-lb/in	600 J/m	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
264 psi (1.8 MPa), Unannealed	190 °F	88.0 °C	
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ³			UL 94
0.020 in (0.50 mm)	V-2	V-2	
0.028 in (0.70 mm)	V-0	V-0	
0.12 in (3.0 mm)	V-0	V-0	
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	482 to 563 °F	250 to 295 °C	
Mold Temperature	140 to 176 °F	60 to 80 °C	

Notes

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

¹ 2.0 in/min (50 mm/min)

² 0.051 in/min (1.3 mm/min)

³ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.

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