

Technical Information



CALIBRE™ EV22 GF30 Advanced Resin

Overview

CALIBRE™ EV22 GF30 Advanced Resin is a 30% glass fiber reinforced high flow ignition resistant polycarbonate resin. This resin does not contain brominated or chlorinated flame retardant additives. CALIBRE™ EV22 GF30 is designed with superior processability for use in structural parts of module endplate for battery pack application. CALIBRE™ EV22 GF30 has a UL 94 V-0 rating at 1.0 mm.

Applications:

- Battery module endplate

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.45 g/cm ³	1.45 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	12 g/10 min	12 g/10 min	ASTM D1238
Molding Shrinkage			ASTM D955
Flow	1.0E-3 to 2.0E-3 in/in	0.10 to 0.20 %	
Across Flow	3.5E-3 to 5.0E-3 in/in	0.35 to 0.50 %	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus ¹	1.10E+6 psi	7600 MPa	ASTM D638
Tensile Strength ² (Yield)	17400 psi	120 MPa	ASTM D638
Tensile Elongation ³ (Break)	1.3 %	1.3 %	ASTM D638
Flexural Modulus ⁴	1.23E+6 psi	8500 MPa	ASTM D790
Flexural Strength ⁴	21800 psi	150 MPa	ASTM D790
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact (73°F (23°C))	1.3 ft-lb/in	70 J/m	ASTM D256
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
264 psi (1.8 MPa), Unannealed	199 °F	93.0 °C	
CLTE - Flow (-40 to 176°F (-40 to 80°C))	3.0E-5 in/in/°F	5.4E-5 cm/cm/°C	ASTM D696
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Dielectric Constant			ASTM D150
0.0630 in (1.60 mm), 1.00 GHz	3.50	3.50	
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ⁵			UL 94
0.014 in (0.35 mm)	HB	HB	
0.04 in (1.0 mm)	V-0	V-0	
0.08 in (2.0 mm)	5VA	5VA	
Injection	Nominal Value (English)	Nominal Value (SI)	
Drying Temperature	203 to 230 °F	95 to 110 °C	
Drying Time	4.0 to 7.0 hr	4.0 to 7.0 hr	
Rear Temperature	482 to 500 °F	250 to 260 °C	
Middle Temperature	500 to 518 °F	260 to 270 °C	
Front Temperature	500 to 536 °F	260 to 280 °C	
Nozzle Temperature	520 to 572 °F	271 to 300 °C	
Processing (Melt) Temp	518 to 563 °F	270 to 295 °C	
Mold Temperature	176 to 230 °F	80 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 0.20 in/min (5.0 mm/min)

³ 2.0 in/min (50 mm/min)

⁴ 0.051 in/min (1.3 mm/min)

⁵ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.

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