

## PULSE™ EV90 Advanced Resin

### Overview

PULSE™ EV90 advanced resin is an ignition-resistant PC/ABS blend that contains no chlorinated or brominated flame retardants. Its superior processing makes it ideal for molding large parts and optimizing cycle time productivity in injection molding operations. It has a UL 94 flammability rating of V-0 at 1.5mm. This resin is suitable for use in a wide variety of applications in power battery module.

Main Characteristics:

- UL 94 V-0 at 1.5 mm
- Does not contain chlorine or bromine additives

Applications:

- Battery module top cover
- Wire harness isolation plate

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.17 g/cm <sup>3</sup>	1.17 g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
230°C/3.8 kg	17 g/10 min	17 g/10 min	
260°C/5.0 kg	75 g/10 min	75 g/10 min	
Molding Shrinkage - Flow	4.0E-3 to 6.0E-3 in/in	0.40 to 0.60 %	ASTM D955
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength <sup>1</sup>			ASTM D638
Yield	9000 psi	62.1 MPa	
Break	6700 psi	46.2 MPa	
Tensile Elongation <sup>1</sup>			ASTM D638
Yield	4.0 %	4.0 %	
Break	50 %	50 %	
Flexural Modulus	410000 psi	2830 MPa	ASTM D790
Flexural Strength	14200 psi	97.9 MPa	ASTM D790
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact (73°F (23°C))	12 ft-lb/in	640 J/m	ASTM D256
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed	201 °F	93.9 °C	
264 psi (1.8 MPa), Unannealed	180 °F	82.2 °C	
Vicat Softening Temperature	227 °F	108 °C	ASTM D1525 <sup>2</sup>
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating <sup>3</sup> (0.06 in (1.5 mm))	V-0	V-0	UL 94
Oxygen Index <sup>3</sup>	29 %	29 %	ASTM D2863
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	428 to 482 °F	220 to 250 °C	
Mold Temperature	140 to 194 °F	60 to 90 °C	