

Technical Information



PULSE™ EV91

Polycarbonate Resin

Overview

Trinseo PULSE™ EV91 is a non-halogen ignition resistant PC/ABS alloy. It combines the superior physical properties of PC and the excellent processability of ABS. Trinseo PULSE™ EV91 is designed with excellent flow for use in battery module. PULSE™ EV91 has a UL 94 V-0 rating at 1.4mm.

Applications: - Battery module top cover - Wire harness isolation plate - Cylindrical cell holder& bottom tray

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.18 g/cm ³	1.18 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	19 g/10 min	19 g/10 min	ASTM D1238
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 Modulus ¹	355000 psi	2450 MPa	ASTM D638
Tensile Strength ²			ASTM D638
Yield	7980 psi	55.0 MPa	
Break	6240 psi	43.0 MPa	
Tensile Elongation ²			ASTM D638
Yield	3.5 %	3.5 %	
Break	100 %	100 %	
Flexural Modulus	377000 psi	2600 MPa	ASTM D790
Flexural Strength	12800 psi	88.0 MPa	ASTM D790
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact (73°F (23°C))	14 ft-lb/in	750 J/m	ASTM D256
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load 264 psi (1.8 MPa), Unannealed	181 °F	83.0 °C	ASTM D648
Vicat Softening Temperature	216 °F	102 °C	ASTM D1525 ³
RTI Elec ⁴	140 °F	60.0 °C	UL 746B
RTI Imp ⁴	140 °F	60.0 °C	UL 746B
RTI Str ⁴	140 °F	60.0 °C	UL 746B
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Volume Resistivity	1.0E+11 ohms-cm	1.0E+11 ohms-cm	ASTM D257 IEC 60093
Dielectric Strength	660 V/mil	26 kV/mm	ASTM D149
Comparative Tracking Index (CTI)	PLC 0	PLC 0	UL 746A
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ⁴			UL 94
0.020 in (0.50 mm), All Colors	V-2	V-2	
--	V-0	V-0	
	5VB	5VB	
Glow Wire Flammability Index ⁴			IEC 60695-2-12
0.06 in (1.5 mm)	1760 °F	960 °C	
Glow Wire Ignition Temperature ⁴			IEC 60695-2-13
0.06 in (1.5 mm)	1380 °F	750 °C	

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	176 °F	80 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Processing (Melt) Temp	374 to 455 °F	190 to 235 °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 0.039 in/min (1.0 mm/min)

² 2.0 in/min (50 mm/min)

³ Rate B (120°C/h), Loading 1 (10 N)

⁴ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.

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