

Technical Information



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 ³	1.17 g/cm ³	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 ¹			ASTM D638
Yield	9000 psi	62.1 MPa	
Break	6700 psi	46.2 MPa	
Tensile Elongation ¹			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 ²
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ³ (0.06 in (1.5 mm))	V-0	V-0	UL 94
Oxygen Index ³	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	

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 Rate B (120°C/h), Loading 1 (10 N)

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

Technical Information



TRINSEO™

trinseo.com

The principles of Responsible Care® and sustainability influence the production of printed literature for Trinseo PLC and its affiliated companies. As a contribution towards the protection of our environments, Trinseo's printed literature is produced in small quantities and on paper containing recovered/post-consumer fiber and using 100 percent soy-based ink whenever possible.

Product Stewardship

Trinseo and its affiliated companies have a fundamental concern for all who make, distribute, and use their products and for the environment in which we live. This concern is the basis for our Product Stewardship philosophy by which we assess the safety, health, and environmental information on our products so that appropriate steps may be taken to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Trinseo products – from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Customers are responsible for reviewing their manufacturing processes and their applications of Trinseo products from the standpoint of human health and environmental quality to ensure that Trinseo products are not used in ways for which they are not suitable. Trinseo personnel are available to answer questions and to provide reasonable technical support. Trinseo product literature, including safety data sheets, should be consulted prior to the use of Trinseo products. Current safety data sheets are available from Trinseo.

No freedom from infringement of any patent owned by Trinseo or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, the customer is responsible for determining whether products and the information in this document are appropriate for the customer's use and for ensuring that the customer's workplace and disposal practices are in compliance with applicable legal requirements. Although the information herein is provided in good faith and was believed to be accurate when prepared, Trinseo assumes no obligation or liability for the information in this document.

NOTICE REGARDING MEDICAL APPLICATION RESTRICTIONS

TRINSEO REQUESTS THAT CUSTOMERS REFER TO TRINSEO'S MEDICAL APPLICATION POLICY [HTTP://WWW.TRINSEO.COM/MEDICAL.HTM](http://www.trinseo.com/medical.htm) BEFORE CONSIDERING THE USE OF TRINSEO PRODUCTS IN MEDICAL APPLICATIONS. THE RESTRICTIONS AND DISCLAIMERS SET FORTH IN THAT POLICY ARE INCORPORATED BY REFERENCE.

For more information on products, innovations, expertise, and other services available from Trinseo, visit www.trinseo.com, or in the U.S. contact us at +1-855-TRINSEO (+1-855-874-6736).

DISCLAIMER

TRINSEO MAKES NO WARRANTIES, EITHER EXPRESS OR IMPLIED, IN THIS DOCUMENT; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE (INCLUDING MEDICAL APPLICATIONS) ARE EXPRESSLY EXCLUDED. SINCE THE CONDITIONS AND METHODS OF USE OF THE INFORMATION AND PRODUCTS REFERRED TO ARE BEYOND TRINSEO'S KNOWLEDGE AND CONTROL, TRINSEO DISCLAIMS ANY AND ALL LIABILITY FOR LOSSES OR DAMAGES THAT MAY RESULT FROM RELIANCE ON THE INFORMATION OR USE OF THE PRODUCTS DESCRIBED HEREIN. TRINSEO MAKES NO WARRANTIES, EXPRESS OR IMPLIED, THAT THE USE OF ANY TRINSEO PRODUCT WILL BE FREE FROM ANY INFRINGEMENT CLAIMS.

GENERAL NOTICE

Any photographs of end-use applications in this document represent potential end-use applications but do not necessarily represent current commercial applications, nor do they represent an endorsement by Trinseo of the actual products. Further, these photographs are for illustration purposes only and do not reflect either an endorsement or sponsorship of any other manufacturer for a specific potential end-use product or application, or for Trinseo, or for specific products manufactured by Trinseo. If products are described as "experimental" or "developmental": (1) product specifications may not be fully determined; (2) analysis of hazards and caution in handling and use are required; (3) there is greater potential for Trinseo to change specifications and/or discontinue production, and (4) although Trinseo may from time to time provide samples of such products, Trinseo is not obligated to supply or otherwise commercialize such products for any use or application whatsoever.

For additional information not covered by the content of this document or to ensure you have the latest version of this document available, please refer to our website at www.trinseo.com/contact.

Follow us at:



Copyright ©Trinseo (2024) All rights reserved.
™ Trademark of Trinseo S.A. or its affiliates
®Responsible Care is a service mark of the American
Chemistry Council



TRINSEO™