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Polymer Resources Launches at NPE2024 New PBT Resin for Electrical Applications, with Full Array of Performance Properties

Customers across multiple sectors can benefit from the new alternative material with robust capabilities, enhanced by reliable supply and signature services

Orlando, Fla. – Polymer Resources Ltd., a leading U.S. compounder of high-quality engineering resins, is launching here at NPE2024 (booth # S27075) its newest product, an unfilled, impact-modified polybutylene terephthalate (PBT) grade for electrical applications. The new TP-FR-IM3 resin delivers a complete array of high-performance properties, including excellent weatherability, high chemical and impact resistance, and flame retardance for outdoor, intermittent outdoor and indoor components such as enclosures and housings. This multi-faceted resin gives customers a much-needed alternative to a very limited selection of existing materials and is backed by Polymer Resources' reliable supply and value-added services.

“To support customers who service the electrical market, we developed a robust PBT material that is ideal for demanding outdoor environments,” said Bill Galla, vice president, Sales, Polymer Resources. “This new grade checks all the boxes, from UL F1 all-color certification for outdoor suitability, to outstanding resistance to lawn and garden, automotive and cleaning chemicals. Our new TP-FR-IM3 resin underscores our commitment to give customers greater choice and help them stay ahead of increasingly rigorous industry requirements.”

Connecting with the Electrical Sector

The market for electrical enclosures in the United States is forecast to grow at a rate of nearly 8 percent between 2024-2028, according to [Mordor Intelligence](#). Demand is being driven by industries such as building & construction, industrial and telecommunications, among others. At the same time, there are very few thermoplastic materials available with the full range of high-performance properties needed for electrical components that are exposed to harsh environments. Polymer Resources' new TP-FR-IM3 resin provides a solution.

This new injection molding grade has earned all-color certification under UL743C F1, demonstrating UV and water resistance for excellent weatherability. This certification is supported by Polymer Resources' custom color capabilities for all of its engineering resins, which include fast and accurate color matches, in-house color experts and onsite spectrophotometer technology.

Also, the product features better chemical resistance than competitive UL F1 certified grades, enabling it to resist degradation from exposure to organic acids, inorganic aqueous salts, alcohols, and mild acid and base solutions, which can lead to stress cracking. It meets both the UL94 V0 and UL94 5VA standards for flame retardance at 1.5mm (0.06 in), and provides good mechanical performance, including high impact resistance. As a PBT material, TP-FR-IM3 resin delivers high electrical resistance, high dielectric strength, and low dielectric loss.

With its long list of desirable properties, TP-FR-IM3 resin is a promising candidate for diverse electrical applications, such as telecom enclosures; electric vehicle charging infrastructure covers; residential and commercial plugs, switches and outdoor enclosures for sprinkler controls; and industrial electrical and cable boxes.

Polymer Resources supports its specialty compounds with comprehensive customer services, including custom formulating, color matching, flexible quantities and technical assistance with material selection, process optimization, tool design and regulatory compliance.

The company is exhibiting at NPE2024 in booth #S27075. The event is being held in Orlando, Florida, May 6-10.

About Polymer Resources

Headquartered in Farmington, Conn., Polymer Resources is a leading, privately owned U.S. supplier of high-quality customized specialty engineering resin compounds, color-matching services and related materials technology solutions for the electrical, medical, consumer goods, business equipment and automotive industries. Operating with an extensive list of UL approved products, it is one of very few polymer suppliers that backs its compounding and color match services with a quality guarantee. The company's commitment to customer service, sustainability, financial discipline and foresight for over 50 years, has made it a reliably steady resource for specialty compounds in the often volatile plastics industry. With operations in Farmington and Rochester, N.Y., Polymer Resources continues to fuel its growth through ongoing investments in its manufacturing assets and its top industry talent. The company's direct sales force and local warehousing throughout the United States enable on-time delivery and fast, local customer service anywhere in the country. For more information, visit www.prlresins.com.

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PHOTO CAPTION



PHOTOS: Electrical Connectors

Polymer Resources new TP-FR-IM3 resin, an unfilled, impact-modified polybutylene terephthalate (PBT) grade, can be used for electrical applications.

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