

Electronic Connectors

PolyOne's sales and technical expertise helps electronic connector manufacturer develop new, high-tech product

Situation

A manufacturer of high-speed, electronic connectors for the telecommunications industry was looking to develop a new connector that would provide the same level of effective shielding of electro-magnetic interference (EMI) and radio frequency interference (RFI) as its current model, but at a lower total cost. Traditionally, manufacturing this particular type of connector has been a slow, time-consuming process with multiple steps often involving manual trimming and assembly.

To be effective in the marketplace, it was determined that this new connector must be the best in the industry at EMI and RFI shielding; be produced in high volumes; and be more cost-effective than the competition. To meet these requirements, the manufacturer's engineers began a search for alternatives to the polymer currently used.

The two criteria determined to be most important were:

- **Electrical Performance** – The resin chosen must be the best in the industry at EMI and RFI shielding.
- **Cost Performance** – The manufacturing process for the new connector must be fast, efficient and suited for large-volume production.

As the manufacturer's team began to evaluate a wide range of resins and additives, they found that most failed to provide the proper balance of properties. The materials were either too difficult to process and were therefore not cost-effective, or they failed to demonstrate adequate EMI and/or RFI shielding properties.



The PolyOne Difference

The PolyOne sales professional listened carefully to the challenges facing the design engineers and quickly involved PolyOne's engineered materials technical team. This team, which specializes in solving unique customer problems, worked closely with the manufacturer's engineers to zero in on the performance targets of electrical conductivity and cost-effective manufacturing.

PolyOne developed a new compound that exhibited outstanding EMI and RFI shielding capabilities. Moreover, the compound met the efficient manufacturing targets and enabled the elimination of some costly assembly and trimming procedures.

Delivering a Value-Added Solution

After a brief period of thorough and rigorous development and testing, PolyOne was able to develop a formulation that met the targeted design and manufacturing requirements. PolyOne's close partnership with the connector manufacturer enabled the fine-tuning of the formulation for optimum performance and processability.

PolyOne's investment in understanding the requirements of the application, coupled with its technical and formulation expertise, meant that this manufacturer was able to fully satisfy its end-use, manufacturing and cost performance targets.

Product choices often vary by region due to differences in regulatory and agency requirements, availability and other key factors. Please contact your nearest sales office for assistance in choosing the right solution for your locale.

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