

RTP COMPANY'S CUSTOM TPE COMPOUNDS PROVIDE WATERTIGHT SEAL FOR WIRING
HARNESSES

About RTP Company

RTP Company, headquartered in Winona, Minn., is a global compounder of custom engineered thermoplastics. The company has eleven manufacturing plants on three continents, plus sales representatives throughout the Americas, Europe, and Asia. RTP Company's engineers develop customized thermoplastic compounds in over 60 different engineering resin systems for applications requiring color, conductive, elastomeric, flame retardant, high temperature, structural, and wear resistant properties.

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WINONA, MINNESOTA, USA -- (December 2, 2010) -- When a well-known national truck fleet approached Maxi-Seal Harness Systems to design a new modular wiring harness for the underside of long-haul semi-trailer trucks, Maxi-Seal saw an opportunity to raise the bar and deliver a new level of reliability. With the help of custom compounder RTP Company, Maxi-Seal developed the new "Defender" commercial wiring harness system, which offers an unprecedented 10-year warranty against leakage and corrosion.

As the connection point for cabling that delivers power from the truck cab back to the trailer, wiring harnesses are exposed to grimy exhaust and road particulate combined with spraying water, caustic de-icing solutions, and other chemical agents. Given this type of environment, a watertight seal, in addition to chemical and corrosion resistance, were essential design requirements.

However, the initial prototypes, which used existing materials, were disappointing due to unacceptable moisture penetration.

The two materials at the heart of the device were the issue -- at the connection point a rigid housing needed to bond with a flexible thermoplastic elastomer

(TPE) overmold and create a watertight seal. "We called several plastic suppliers and explained our challenge," said Eric Doerflinger, Manufacturing Engineer at Maxi-Seal. "They would look at their catalog and say 'try our product number such and such.' We would, and when it wouldn't work they would say 'sorry, that's all we have.' That happened time and time again."

Maxi-Seal contacted RTP Company who brought in their TPE specialist. "After a few conversations, they went to work developing two materials specifically for us," said Doerflinger. "We tried them, and found that RTP Company pretty much provided the right solution on the first try."

The custom engineered materials included an RTP 1000 Series polybutylene terephthalate (PBT) compound reinforced with glass fiber for the rigid housing, and an RTP 1500 Series polyester thermoplastic elastomer (TEEE) compound for the flexible overmold, which forms a watertight seal. Both compounds provided the necessary chemical and corrosion resistance while

bonding so well together that the harness has successfully endured field tests on a fleet of 20 trucks driven 1.6 million miles.

The innovative wiring harness design has allowed Maxi-Seal to beat out competitors to win all the wire harness business for the national truck fleet, an extremely large order in the industry.

"RTP Company was key in helping us win this very important business," said Doerflinger. "Their willingness to look at this uncommon application and work with us to find a solution makes them a very valuable partner."

For more information on RTP Company custom thermoplastic compounds, call (507) 454-6900 or toll-free at (800) 433-4787, e-mail rtp@rtpcompany.com or visit the RTP website at www.rtpcompany.com.

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About Maxi-Seal Harness Systems

Maxi-Seal Harness Systems, Inc., of Grandview, MO, is a leader in developing and manufacturing custom engineered wiring harness systems. The company is a subsidiary of Peterson Manufacturing Company, a manufacturer of vehicle lighting products. For more information, visit www.maxisealharness.com

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Note: If you would like more information about this story, or if you would like to speak with a RTP Company spokesperson, please contact Kris Jommersbach at krisj@geminiinc.com