



Industrial Chemical

PRESTONE®

Stop Leak

TricorBraun Engaging Packaging for Prestone's New Stop Leak Products Allows Consumers to View the Elements

Prestone® Products Corporation's new advanced, patent-pending Triple Seal Protection™ Stop Leak family of products help eliminate expensive consumer auto repairs to radiators, head gaskets and engine blocks. While each product is a slightly different formulation, intended to address different challenges, the consumer uses each in a similar manner.

To effectively deliver the value and ease-of-use of this complex product and simplify the consumer experience, TricorBraun partnered with Prestone to develop a functional, transparent, three-compartment intuitive package design. This design allows the consumer to clearly see all of the elements of the product and engage with the product in a way that provides a more positive user experience.

The product's three active ingredients are beads and two liquid chemicals. The packaging brief called for a unified design that communicated to the consumer an "all-in-one system" while also providing storage for each of the ingredients in separate dosing chambers. First, the consumer adds the effervescent beads found in the

top dosing chamber. Second, the consumer easily and simultaneously pours the two separated liquid components from the inner preform tube and exterior bottle into the designated problem area. The resulting mixture seeks and finds the location of the leak and creates a web of fibers that bind to the metal around the leak while an acrylic polymer hardens and secures the seal.

"This product is completely different from most traditional stop leak solutions, which are pre-mixed and packaged in opaque bottles," says Thomas Kalagher, Marketing Product Manager, Prestone Performance Chemicals. "What we have seen with comparable products in other industries is the more that consumers interact with a product, the more confidence they have that it will work."

In spite of the fact that the Triple Seal Protection's three ingredients must be stored separately, Prestone wanted them packaged as one convenient, transparent unit to enhance the consumer's engagement

with the new product. "We knew from the beginning how we wanted the packaging to look and work," adds Kalagher; "but we needed TricorBraun's design expertise to help us make the package manufacturable."

According to TricorBraun VP of Engineering & Technical Services, Jon-Paul Genest, "Prestone approached us with a complex and unproven design and what seemed like an impossible launch date. Our project management team responded with an

actionable and manageable timeline and clearly defined deliverables. We maintained close collaboration and managed expectations throughout the process. From there, we engaged with one of our trusted development partners, Currier. Optimizing our path to success was critical every step of the way."

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Massimo Leone, VP Business Development, Currier Plastics describes what happened this way, "Working as a team with TricorBraun, we collectively managed to successfully finalize three different materials and four separate components with two different technologies. Both the injection molding and injection stretch blow molding process disciplines were needed. Also, three prototype injection molds were launched concurrently with the injection stretch blow mold production tool. Timing was absolutely critical as the product was required to launch within three months from start to finish. Without the combined efforts of our mutual team, the aggressive launch date would never have been met."

Developing the package

Kalagher's concept for the package was a clear bottle with a smaller inner tube and a dosing chamber on top that houses the beads. His discussions with TricorBraun packaging engineers began with "Can we do this?" The answer was "Yes," followed by, "How quickly can we do this?" TricorBraun responded with a clearly defined timeline of how they would meet the targeted launch date; a process that included simultaneous development of four custom tools including a new 16 oz. PET production mold developed in only eight weeks. The development process involved TricorBraun engineers, Prestone stakeholders and a contract manufacturer that could efficiently and cost-effectively fill the complex package. Prestone was able to get to market in record time.

The final package consists of four components: a 16 oz. PET (polyethylene terephthalate) primary bottle, a 3 oz. fitment bottle made of injection molded clarified PP (polyethylene), a 3 oz. clarified PP canister with a 51 mm custom squeeze and turn closure, and a PP lid that snaps on top of the primary bottle. The fitment bottle features a "wagon wheel" openwork neck ring that mates with the primary bottle, allowing both liquids to pour simultaneously during application. All of the bottle's elements were molded by Currier Plastics, Inc. using molds designed by TricorBraun and built by its manufacturing partners.

The filled bottles are shrink labeled with labels that carry both

branding and use instructions for each product. The label includes two perforations: one down the side of the top canister and one around its base, allowing users to remove the canister. With a pinch and a turn, the cap of the top canister is removed for dispensing.

The complexity of the package and Prestone's tight deadlines required TricorBraun and Prestone to collaborate closely to ensure that everything would work together, including running test bottles down a filling line to confirm its stability and functionality. "We have been extremely pleased with TricorBraun's ability to work closely with us in timely fashion to complete this very complex project," Kalagher says. "Designs were approved in January and by April we had our products on shelves."

"Initial sales have been great, and feedback from retail partners and consumers has been very positive. As a result, we are looking forward to showcasing this to additional outlets in the future."

About Prestone

Headquartered in Lake Forest, Illinois, Prestone manufactures and markets antifreeze/coolant, brake and power steering fluid, and other leading vehicle maintenance products. For more information about Prestone visit www.Prestone.com.

About TricorBraun Design & Engineering

TricorBraun Design & Engineering Group is a business unit of TricorBraun, one of North America's leading providers of rigid, corrugated and flexible packaging. Our team's primary mission is to design, engineer and manage the development, production and commercialization of custom packaging solutions for personal care, cosmetics, healthcare, food and beverage, industrial household chemical and animal health products. It is supported by TricorBraun's more than 40 offices globally, holding one of the largest inventories of rigid packaging components worldwide.

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