

Nestlé Purina PetCare Company Decreases Build Time by 75 Percent with FDM® Technology

Plastic litter jugs are not glamorous products, but to pet owners they are expected to be ergonomic while holding a considerable load. The Nestlé Purina PetCare Company recently redesigned its cat litter jugs using Stratasys Fused Deposition Modeling (FDM®) technology to meet critical deadlines while retaining product quality.

The Nestlé Purina PetCare Company (purina.com) was formed in 2001 to create food, treats and litter products for dogs and cats. In April 2009, the company embarked on a redesign of its cat litter jugs.

Preparing for Change

“This is the biggest cat litter packaging change attempted in years,” said Stephen Wurth, designer. “In the past, we’ve changed the materials used to make the product lighter or in ways to save costs, but this is the first big change in consumer-driven design.”

“We wanted to improve our existing jug to create a better experience for our customers,” said Wurth. Because this was such a major step for the company, the brand team created five designs, all unique in terms of functionality and aesthetics. The designs would be tested by consumers across the country using prototypes created by RedEye on Demand.

Nestlé has rapid prototyping capabilities on site, but it could not meet the deadline for testing because each jug would have taken more than 50 hours to build. Designers needed nine copies of each of the designs, for a total of 45 products, in order to conduct tests in multiple cities. They also needed them quickly. “Normally, we don’t use outside suppliers,” said Wurth, “but for the vast quantity we needed, we had to go outside to satisfy the time frame. Had we done this inside, it would have taken us half a year.” By November, Wurth was ready to have RedEye on Demand start building the prototypes.

FDM Technology

The jug designs were created within CAD and produced with Stratasys FDM additive fabrication technology. Wurth easily uploaded his five designs to redyeondemand.com and received an instant quote.



“Had we done this in-house, it would have taken us half a year.” said Stephen Wurth, Nestlé Designer.

Würth needed his prototyped parts to be sturdy enough to withstand demanding consumer testing. Because FDM prototypes are made with production grade thermoplastics, such as the ABS-M30 chosen by Würth, they do not warp, shrink or absorb moisture, making them accurate, stable and durable. In addition, their tolerance is consistent over time.

Successful Testing

“Having this outside resource was really useful,” said Würth, “ABS-M30 maintained its structural integrity even during rigorous consumer testing.” ABS-M30 is stronger in tensile strength than standard ABS and met Würth’s criteria for handling 20 pounds of cat litter.

“The results are being evaluated now, but we feel the tests were extremely successful. We learned a lot.” The design that was the clear winner has been redesigned based on input from consumers. More testing will be conducted to refine the design even further.

“Using its FDM systems, RedEye was able to meet our delivery date with all 45 jugs,” said Würth. “It cut down a three- to four-month build process into a matter of two to three weeks. That’s a 75 percent decrease in time. This project was all about quality and quantity,” he added. “RedEye provided us with a real robust container that got us where we wanted to be. It was the only company that could satisfy the quantity and build quality we needed in the given amount of time.”



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