

Bard Urological Puts Priority on Package Quality

In 1936, Bard Urological, a division of C. R. Bard, Inc., developed the Foley balloon urological catheter with Davol Rubber, a company Bard later acquired. Many years and several innovative developments later, including the debut of the sterile, single-use procedure tray Bard remains the only U.S. manufacturer of these premium urological devices -- and is the industry leader with 70 percent market share.

Bard takes great pride in supplying its customers with high-quality catheters in a wide variety of shapes and sizes to meet different patient needs. This commitment to quality also carries over to product packaging. It not only has to look good, but also has to offer excellent resistance to bacteria, water or moisture, and punctures, and provide a clean, fiber-free peel. That's why when internal evaluations and customer feedback indicated that the paper Bard was using to package its catheters wasn't peeling cleanly, often tearing in the wrong place and releasing particulates that could contaminate a sterile environment, the company quickly began to research the problem.

"We realized early on that paper just wasn't providing the high-quality packaging our product requires," explained Doug Uelmen, Division Quality Assurance Manager, "and, our customers let us know they weren't happy because the long and narrow package was difficult to open without it tearing in the middle."

In February 1992, a cross-functional team at Bard's Moncks Corner, South Carolina, manufacturing facility was chartered to examine possible alternatives and improve overall package integrity. The team began by examining different combinations of paper grades and coatings. "We wanted to verify that the problem wasn't with the specific type of paper we were using," said Irving Robinson, Purchasing Agent. "So, we ran extensive tests using different pressures, temperatures, and dwell times on eight or nine paper thicknesses with a variety of coatings. When we couldn't find an acceptable substitute, we switched gears and began to run the same tests on DuPont Tyvek® spunbonded olefin."

Successful evaluations were conducted on Tyvek® 1059B, which offered a variety of coatings and was obtainable from different suppliers. The team made its final selection and the first lot was packaged in Tyvek® and shipped in October 1992. "Tyvek® has all the qualities we were looking for when we set out to correct the paper tear problem," said Uelmen. "It doesn't tear or shed, and customers always get a clean, easy peel."

"Because Tyvek® is available with a long list of machine-friendly coatings that aren't available with paper, we realized an added benefit when we made the switch," Uelmen continued. "The combination of coating and Tyvek® 1059B that we chose allows us to seal the packages in the mid-range of our form/fill/seal capability. As a result, we can now achieve a seal quality that consistently meets our specifications."

Carl Sprouse, Packaging Supervisor, noted that only minor equipment modifications were necessary to get the line up and running smoothly. "Tyvek® is a little more difficult to slit than paper," Sprouse explained. "We compensate for that by changing the slitter blades more often to keep them sharp. Also, since Tyvek® stretches and the paper didn't, we had to make some minor adjustments when running a job. But a new machine we just brought online doesn't even require this minor fine-tuning because it adjusts automatically to correct for stretching."

Sprouse added that Bard operators enjoy running Tyvek® because it processes better than paper, with a lot less equipment downtime. And, even more importantly, customer response to the new packaging has been enthusiastic. "Feedback has been terrific all around," Uelmen emphasized, noting that sales representatives and marketing personnel are equally pleased. "Customer satisfaction was the driving force behind our decision to get out of paper, and we couldn't be happier with the results of this switch to Tyvek®."