# A Plastic Option for Pharmaceutical Packaging

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Owens-Illinois introduces injection blow-molded multi-layer containers

TOLEDO, Ohio – January 8, 2004 – It's no secret that drug costs continue to skyrocket, and some would argue that it's getting out of control. Recognizing this problem, pharmaceutical companies are doing all they can to minimize costs and product losses. And now, they're getting a little help from the Owens-Illinois Plastics Group, Plastic Containers (O-I).

O-I has created the first line of multi-layer, injection blow molded plastic bottles and vials for drug packaging. The new bottles, which utilize O-I's patented SurShotSM multi-layer injection technology, offer a user friendly alternative to pharmaceutical glass for packaging injectable drugs, diluents and other products.



"We spent 10 years developing and testing these bottles for pharmaceutical use," said Bill Negrini, vice president and business manager, Health Care,
O-I Plastics Group, Plastic Containers. "We're seeing exceptional interest from drug companies. As the only clear, multi-layer plastic alternative to Type 1 pharmaceutical glass, these containers give drug companies the flexibility to utilize plastic packaging, while offering tailored levels of barrier, strength and other properties."

The multi-layer containers offer a moisture barrier layer with exceptionally low permeability to water vapor, high transparency, clarity and chemical resistance and ease of processing. In keeping with O-I's SurShot technology, the barrier can be sandwiched between inner and outer layers of polycarbonate, PET or COC. If impermeability to water vapor and oxygen are needed, the barrier layer can be combined with an oxygen barrier material. The combination of these materials allow for moisture control and barrier properties never before seen in plastic containers.

The SurShot process allows O-I to control barrier content down to two percent of total package weight. The bottles are available in wall thicknesses from 20 to 60 thousandths of an inch and in capacities from three to 250cc.

BioMérieux, Inc. is the first company to use the vials, and is in the process of converting its entire product line.

"Performance is at the forefront of important hospital and laboratory issues today," said Philippe Sans, president and CEO, bioMérieux North America. "To create a more user-friendly laboratory environment for patients and employees, an initiative has been instituted to convert from glass to plastic products wherever possible. O-I has provided us with a product that enables us to do that – while maintaining the utmost quality levels."

The multi-layer vials and bottles have earned the endorsement of the North American Scientists Association (NAMSA), the premier company specializing in evaluating the safety of medical packaging. After undergoing rigorous testing procedures, the containers were found to be significantly below the USP levels for polymeric materials.

"What's very significant here is that we were unable to find anything in the sample that wasn't present in the control group," said Stephanie Taylor, technical specialist, NAMSA. "O-I has created a great marketing tool. It's especially significant because right now, there aren't a lot of manufacturers doing this kind of testing – and those that are aren't having these kind of results.

"There's a demand for this kind of product, as it's becoming more and more difficult for customers to continue to use Type 1 glass," Taylor continued. "People want plastic – this gives them what they want."

But the developments don't end there: O-I is perfecting anti-counterfeiting techniques that will be incorporated into the multi-layer structure. Look for that to be released in early 2004.

Owens-Illinois is one of the world's leading manufacturers of plastic containers, glass containers and closure systems. O-I's Plastic Group, Plastic Containers offers an unparalleled selection of materials, processes and innovations to address a wide variety of packaging demands and is the leading packaging supplier in North America in each of the markets it serves. O-I's patented processes, including SurShotSM multi-layer injection technology and SurBond™ and SurFresh™ barrier materials, allow for precise delivery of barrier material based on customer needs.

More information about Owens-Illinois Plastic Containers is available by calling (800) 537-0178 or by visiting www.o-i.com. Media inquiries please call (419) 241-2221. (###)