



Innovative medical molders are thriving

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Despite the sluggish U.S. economy, plastic companies in the medical business are optimistic that they will achieve double-digit growth when 2008 numbers are tallied.

"We have been aggressively pursuing this market," said Matt Langton, vice president of sales and marketing for United Plastics Group Inc. "Medical is thriving and our customers seem to be doing well."

Langton said the Oak Brook, Ill.-based contract manufacturer is on track to hit its budget for 2008. He spoke in an interview at Medical Design & Manufacturing East, held June 3-5 in New York. UPG serves the medical, consumer goods, automotive and electronic markets.

"It has been a good year in terms of acquiring new business, especially in medical devices," he said. Numerous original equipment manufacturers are considering moves offshore and consolidations of suppliers. Others are looking to outsource their molding operations. UPG has benefited from that, he said.

At Medplast Inc. in Tempe, Ariz., "our mandate is for significant trajectory growth" starting in 2009, said Frank Torti, vice president of sales and marketing. MedPlast is a \$90 million medical-device manufacturer that formed in April when Baird Capital Partners purchased and merged K&W Specialties of Westfield, Pa., with the engineered rubber and plastics group of Applied Tech Products Corp.

"It is all about growth in medical, added rubber silicones capacity and tuck-in acquisitions," said Torti, who works out of MedPlast's West Berlin, N.J., plant.

Pushing innovation

That optimism for the plastic medical business is reflected in the aggressive way resin companies are introducing new materials and developing new applications.

For example, GLS Corp. introduced four new thermoplastic elastomers it hopes will give the firm a presence in the gasket and seal stopper markets in the health-care industry.

"Why are we launching this now?" said Joseph Kutka, technology launch manager for GLS, the McHenry, Ill., business unit of PolyOne Corp. "With these technologies for syringes and bottles, we want to show people that we are more health-care-focused than in the past."

Kutka said the company's new Versaflex HC-2110 resin comes in two grades, 57B and 54B, and can be used for gasket applications for single-use devices such as prefilled syringes. The higher grade is for syringes that must be autoclaved; the lower grade for lower-cost devices.

For stoppers, GLS' new TPE resins can replace thermoset rubber stoppers that are sometimes prone to break off in little pieces during needle insertion. Its Versaflex HC 2132-51N is designed for vacuum-sealed containers and its Versaflex HC 2110-43N for the reseal qualities needed for stoppers for fluid-delivery systems such as intravenous bottles and medical vials.

"They can be used in any type of vacuum containers, including blood-collection bottles," Kutka said.

"Now is the time for us to show what thermoplastic technologies we have for health care," he said. "A lot of designers don't know what is out there."

Mardye Lindway, health-care industry manager for Sabic Innovative Plastics LP in Pittsfield, Mass., also

sees strong demand for innovative uses of resins in medical applications.

“We are going to continue to stress the material innovation piece of our business,” said Lindway, who works out of the company’s Waxhaw, N.C., location. “We see continued demand on our chemical resins to help in managing infection and contamination.”

He points to a solution Sabic developed for Biorep Technologies Inc., a Miami-based company with a treatment therapy for patients with diabetes.

A year ago, Biorep switched from using a stainless-steel chamber for isolating insulin-producing cells in the pancreas to an injection molded chamber made from Sabic Ultem HU polyetherimide resin. Biorep also switched to a disposable perfusion tray molded from Sabic’s Cicolac HM ABS resin.

Felipe Echeverri at Biorep said the material changes were a big help to his company.

“They allowed us to replace the stainless-steel products, which brought reductions in cost and weight. In addition, being able to see through the chamber was especially helpful for the scientists to be able to assess the digestion stage of the pancreas. We were now able to produce the chambers in higher quantities, so we could keep some stock. In other words, we could ship chambers on the same day they are ordered instead of making them on a one-by-one basis.”

Sabic’s Lindway said Biorep’s stainless-steel system was too expensive.

“They were looking for a more cost-effective solution to isolate the insulin-producing cells faster and more efficiently so they could get this treatment out to the masses,” Lindway said.

“Health care and medical devices are still seeing good growth,” Lindway added. “We still see double-digit growth in many specific applications and across our resin families.”

Scott Hanson, global industry leader of the medical market segment of Eastman Chemical Co., has a similar market appraisal.

“We don’t believe the demand for health care is going to decline anytime soon,” Hanson said. “We still see good growth. Demand continues to increase as new technologies and techniques come along. As globalization and emerging economies become more fluid, the demand for health care will just grow more rapidly.”

One trend that favors plastic materials is the pressure on health-care institutions to achieve greater efficiency, he said.

“There is pressure to make disposables more cost-effective and efficient,” said Hanson. “We also see cost pressure on everyone from our suppliers to other users of the products as everyone tries to manage these ever-increasing health costs.”

A case in point: a 21-inch vascular graft culture tube that Kingport, Tenn.-based Eastman designed for Artegraft Inc. from Eastman’s medical-grade Eastar copolyester MB002. The tube has a flat side to prevent the product from rolling off tables, as previous glass tubes were prone to do.

“Because of the flexibility of our material and its moldability, we were able to develop a tube that was flat on one side,” said Hanson. “It is a sustainability story as well, because we were able to reduce the amount of secondary packaging” needed in shipping.

“Our customers are always looking at new materials or new processes to lower their costs,” he said. “They are looking for new materials that help them run the processes more efficiently and to optimize their processes to shave costs out of their system.”

One example: Hanson said that a global medical-device manufacturer asked Eastman to help streamline and optimize its production process in three years. The results? “We helped them achieve a reduction in

cycle time of nearly 50 percent, [reduced their scrap rate], reduced complaints [with] improved quality and clear cost savings due to reduced cycle times per unit that also lowered energy and labor costs," he said.

He added that the shift of more health care from hospitals to homes or small offices will also boost plastic resins.

"There is continued cost pressure to get people out of hospitals and move them to less costly health-care environments. Those markets are well-suited to plastics," he said.

Those trends have caught the attention of GLS' parent, Avon Lake, Ohio-based PolyOne, which introduced its Trilliant HC portfolio of specialty engineered materials for the medical market at MD&M East.

"We want to push the company into high-value market segments," said Craig Nikrant, vice president and general manager of PolyOne's new specialty engineered materials business. "Our top priority is to be able to offer value solutions that are economically viable and different from others" in the marketplace.

He points, for example, to the company's HC PbF lead-free polymer-metal composite that can be used to replace lead in radiation shielding for scanners and diagnostic equipment.

"It also allows you to do a part consolidation with a one-piece molded product, as well as a metal replacement.

"Our customers are looking for alternatives from an environmental standpoint," Nikrant said.

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