

# BASF finding new commercial successes

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PLASTICS NEWS STAFF

BUDD LAKE, N.J. — BASF Corp. expects the first commercial use of a product made with its water injection molding technology by the year's end. The firm also has seen recent success with a scaffolding product made with a grade of its nylon 6 resin.

Florham Park, N.J.-based BASF first got involved in water injection molding in 2003 and 2004, and then did developmental work in 2004 and 2005, said Thomas Krolick, an advanced process technology manager for BASF's engineering plastics unit.

The main advantage offered by water injection molding vs. standard processes or gas-assist technology is lower cycle times, which are created by shorter cooling times, Krolick said in a recent interview at the firm's lab center in Budd Lake. Water-based cooling times can be improved by as much as 50 percent vs. conventional methods.

The first commercial application of BASF's technology is likely to take place in Europe, Krolick said, potentially in structural handles for appliances or in parts used for fluid handling. These first parts — typically hollow parts with diameters of 2 inches or less — can be made from BASF-made glass-filled grades of



Krolick

Fleck

nylon, PET or polybutylene terephthalate. Several parts made with non-BASF water injection technology already are commercial in Europe, he said.

Several European molders have licensed BASF's water injection technology through equipment vendor PME Fluidtec GmbH of Kappel-Grafenhausen, Germany. In the U.S., BASF's technology is offered to molders through Cimpres Gas Injection Ltd. of Middletown, N.J.

Krolick added that a history of gas-assist lawsuits have "scared away" some potential licensees.

"Realistically, we should have a commercial product by the end of the year," said BASF senior process engineer Randy Fleck. "The licenses are in position. Molders are confident now and they're developing programs."

Fleck will present a paper on BASF's water injection technology at the Plastex conference in Toronto in May. In a conference

call, BASF technical development engineering manager Harold Colwell said familiarity with gas-assist technology would be helpful to a molder considering water injection technology.

"It takes a very high-quality, sophisticated molder to use this method," he said. "If the molder already knows gas-assist, it takes less time to learn our technology."

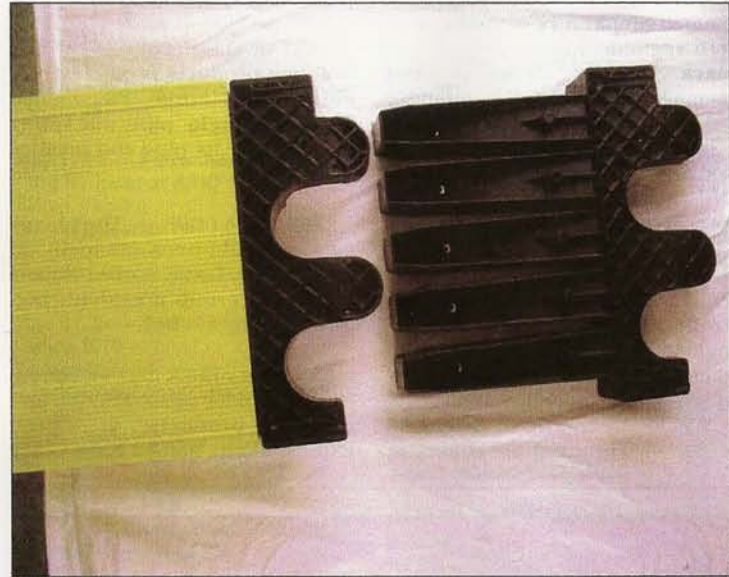
In the scaffolding market, a high-impact, elastomeric grade of BASF's nylon 6 is being used in a connector piece by scaffolding maker Bothwell Enterprises Inc. of Upland, Calif.

Bothwell makes lightweight, fiberglass composite scaffolding that can hold weights of up to 1,500 pounds.

The connector piece has a reinforced-steel insert and is connected to the scaffolding by a locking pin, said BASF application development manager Emile Homs. Two planks with connector pieces then interlock in a Lego-type method that is safer than previous products, Homs said in a conference call.

The project was brought to BASF by an industrial designer who saw an opportunity for material replacement vs. steel. The connector piece first was commercialized on the Bothwell planks in late 2006.

The planks can be cut to different lengths, then reattached us-



Manufacturer Bothwell Enterprises Inc. of Upland, Calif., is using a high-impact, elastomeric grade of BASF's nylon 6 in a connector piece for its fiberglass composite scaffolding. Bothwell commercialized the connectors on its scaffolding planks in late 2006. Each connector's reinforced-steel insert helps form an interlocking mechanism between planks.

ing the same connector pieces, Homs explained. A 10-foot Bothwell plank weighs only 28 pounds. The planks are pultruded by TopGlass SpA of Milan, Italy, using material made by Owens Corning.

The connector pieces currently are molded in Italy, but Homs said Bothwell is looking to expand production later this year to

North America, where most of its market is located.

BASF Corp. is the North American arm of chemical giant BASF AG of Ludwigshafen, Germany. BASF AG generated sales of 52.6 billion euros (\$66 billion) in 2006. BASF's plastics business was the largest of its five units in 2006, bringing in 24 percent of total sales.