

# Plastics Technology

Dedicated to Improving Plastics Processing

June 2011

## Serving Up Innovation

In Medical Compounding



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Smoothing Mold Transfers

Solving Upstream Problems  
in Extrusion

Biopolymer Sheet Extrusion  
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## New U.S. Molding Operation Brings Processing In-House

Freudenberg Household Products (FHP), Germany, known in the U.S. for its line of O-Cedar mops, brooms, dust pans, etc., has joined forces with Spanish injection molder SP Berner Plastic Group, S.L., to form a joint venture company called FHP Berner U.S. In January the JV opened a molding plant in Aurora, Ill., bringing back 30 molds and millions of pounds of production capacity for mop, broom, and assorted other components that had been outsourced. The 101,000-ft<sup>2</sup> facility opened in January with 14 injection presses, ranging in size from 120 to 600 tons. Most are automated, featuring 3-axis robots from Star Automation, Milwaukee. FHP runs mostly PP homopolymer in molds up to 16 cavities.

Francesco Burrone, who designed the entire plant in cooperation with his Spanish colleagues and is currently plant manager, says FHP Berner is now in Phase 1 of a two-part plan that will include the purchase of at least another dozen presses and the doubling of its workforce to 100. FHP Berner received about \$100,000 in energy incentives from its local utility for building what it described as an energy-efficient facility "from the ground up." Two examples: office lighting is motion-activated, and the particular type of grass

that surrounds the facility does not require daily watering. It also opted for a towerless mold- and machine-cooling system from Greenbox Systems, which has a U.S. operation in Bensenville, Ill., and a materials-conveying system from Motan (U.S. office in Plainwell, Mich.).

FHP Berner has hired 50 employees during the first phase, and it is expected to double in one year, says Burrone.



## New Ownership for Husky

Boston-based private-equity firm Berkshire Partners and OMERS Private Equity of Toronto reportedly paid \$2.1 billion last month to jointly buy Husky International Ltd. and its subsidiaries, which makes injection molding machines, hot runners and molds. Husky was founded in 1953 by Robert Schad, who sold the company to Onex Corp. in 2007. Husky's operating profit reportedly more than doubled since then. The transaction is expected to close by the end of the third quarter.

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## Rotary Batch Mixers Help Boost In-House Recycling

While sustainability is a relatively new term in plastics, rotary batch mixing is an old warhorse in many processing operations. But the two came together in Auburn, Pa., where film processor Omnova Solutions credits mixers from Munson Machinery Co. Inc., Utica, N.Y., for enabling efficient in-house recycling. Omnova compounds, calenders, prints, embosses, and coats primarily PVC films. Over the years Omnova has cut its scrap rate significantly, but the calendering process inherently generates waste material that could be recycled. In an effort to effectively reuse this material and improve the plant's environmental footprint, Omnova purchased a Munson 700-TSC-300 rotary batch mixer with capacity of 18,000 lb. The company granulates its start-up and process waste material and then blends it in the mixer. One benefit of the machine's mixing efficiency was to reduce variations in particle-size distribution, says Steve Reed, process engineer. This prevents particle segregation and problems arising from different melt temperatures during reprocessing.

The company was recycling a handful of colors at the time—black, white, and blends of red, green, and blue. The ability of the mixer to produce consistent blends made in-house recycling possible. "The blends that we were releasing to production had to be within a pretty tight color tolerance," Reed says. The rotary batch mixer achieves homogeneous blending through the use of internal mixing flights that tumble, turn, cut, and fold the batch. The gravity-fed process produces uniformly mixed batches in 3 min or less and achieves full discharge. The mixer has a small footprint, dust-tight operation, and low energy consumption. With more materials and colors added to the production schedule, Omnova invested in a second, smaller Munson mixer with a capacity of 5000 lb.

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