

**PRESS RELEASE**

**-for immediate release-**

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## **MuCell® Technology from Trexel, Inc. Offers Multiple Benefits for Thin Wall Packaging Applications**

*Technology changes the economics of thin wall molding*

**(Trexel, Inc., Wilmington, MA January 15, 2015)...** For over 20 years, Trexel has supplied MuCell foaming technology that creates a microcellular material structure in plastic parts providing multiple processing advantages. The MuCell technology involves the introduction of N or CO<sub>2</sub> as the foaming agent in supercritical state into the polymer in the plasticizing unit of an injection molding machine. Specifically within the packaging market, MuCell meets the growing demands and trends by providing molders benefits such as: lower part costs due to lower material consumption and increased productivity and efficiencies, increased mold cavitation and thin walling by lowering cavity pressure and in mold labeling and the ability to achieve complex product designs.

“Our customers have seen many marked process improvements by utilizing MuCell. From reduced clamp tonnage requirements to reduced material usage, our technology provides them a real cost advantage,” said Steve Braig, President and CEO of Trexel, Inc.

## MuCell Molding Technology

### Reduced Costs

- Reduced resin consumption
- Faster molding cycle time
- Increased yields
- Smaller molding machine
- Use of lower cost filled polyolefin material

### Design Freedom

- Thin to thick wall flow
- 1:1 wall thickness rib structure
- Material where needed for function versus flow
- Improved dimensional stability
- Less warpage

### Sustainability

- Reduced petroleum based material consumption
- Reduced molding machine energy consumption
- Ability to re-grind / re-use molded parts
- Reduced carbon footprint versus solid molding

### Faster to Market

- Fewer tooling iterations
- Predictable molded part geometry
- Ability to mold large parts as single piece

### Application Example:

#### Paccor SLIM – Super light Injection Molding

The goals of this particular packaging application was to reduce the package weight by 12-15 % while using existing 350 ton machines and incorporating the thinnest labels available on the market.

The results of incorporating the MuCell technology



**Autobar SLIM® Container**  
**0.38 MM; 15.2 grams**

were as follows:

- **Significant part weight reduction**

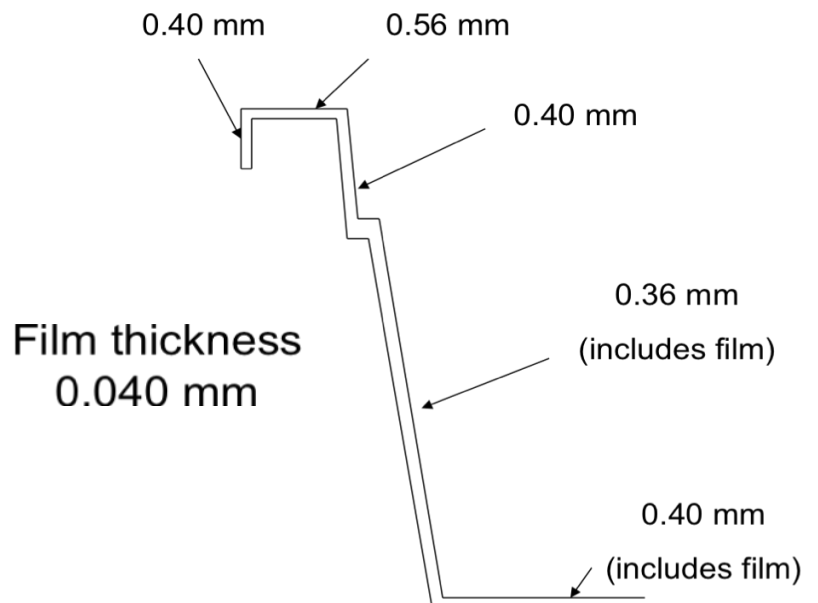
- Reduced wall thickness of the base and sidewalls to 0.35 mm
- Flow leaders in base to create uniform fill pattern for sidewalls
- Left seal surface at 0.56 mm
- 13% total less material by design and foaming

- **Reduced clamp tonnage by 35%**

- 4+4 stack molds on 350 ton machines instead of 500+ tons
- Higher cavitation for same size machine
- Foam expansion as the packing force
- Provided packing of the thicker seal surface at end of fill

- **Reduced injection pressure**

- Additional thin walling up to 15% in same machines
- Reduced injection pressure by 10% due to viscosity reduction
- Improved IML performance- less distortion and wash out due to lower pressures
- Ability to use thinner labels



**About Trexel, Inc.**

Trexel, Inc., headquartered in Wilmington, MA has led the development of the MuCell® Microcellular foaming technology and has pioneered many plastic processing solutions. Process deployment as well as equipment is supported by teams of highly qualified engineers through Trexel subsidiaries in North America, Europe, and Asia. For more information, please visit [www.trexel.com](http://www.trexel.com).

® MuCell is a registered trademark of Trexel, Inc

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(hi res photo file attached separately)