

PRESS RELEASE**PRMPR018EN****Lightweight, sustainable, efficient: Microcell technology enables 20% material savings in plastic packaging**

Winterthur, Switzerland – March 2026. Plastics are indispensable in the packaging industry: They reliably protect products, often have a lower carbon footprint than alternative materials, and can be processed efficiently. At the same time, pressure is mounting on manufacturers to conserve resources and further reduce raw material use—without compromising stability, functionality, or recyclability. With the introduction of the EU PPWR, only packaging that is fully recyclable may be placed on the market starting in 2030; in addition, there are ambitious targets for the use of recycled materials.

Promix Solutions AG offers an economically and ecologically compelling solution to meet these challenges: Microcell technology. It typically reduces packaging weight by around 20%, fully preserves mechanical properties, and enables true recyclability.

Visit Promix from May 7 to 13 at interpack in Düsseldorf – Hall 7a, Booth C15, Swiss Pavilion.

Lighter packaging – same performance – tangible cost savings

Microcell technology incorporates environmentally neutral gases such as CO₂ or N₂ into the plastic. This creates a fine-pored, microcellular foam structure. Cell size and cell distribution are crucial: a very fine and homogeneous structure ensures that cups or trays achieve the same stability as conventionally manufactured packaging even after thermoforming—despite significantly reduced density.

A typical extrusion line for packaging film with an output of 800 kg/h saves up to 3.8 tons of plastic daily using Microcell technology. This amounts to approximately €3,800 per day or over €80,000 per month. Extrapolated over a year, this results in a reduction of around 1,000 tons of plastic per line.

The lower film weight at the same film thickness not only reduces energy consumption during thermoforming but also reduces transport weight—which leads to an overall improved carbon footprint. The technology is suitable for virtually all polymers and can be seamlessly integrated into both existing and new systems.

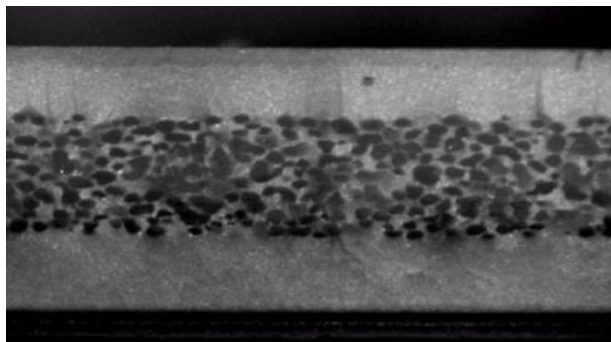
Environmentally friendly and fully recyclable

Since Microcell uses environmentally neutral blowing agents and no environmentally harmful additives, the packaging remains fully recyclable. Even production residues generated during thermoforming can be easily recycled, as the additive does not accumulate in the material as chemical blowing agents do.

Microcell technology is suitable for a wide range of packaging applications produced via extrusion and thermoforming processes: food packaging such as cups or trays, boxes, and technical packaging, as well as form-fill-seal (FFS) applications.

The “lightweight” yogurt cup

For yogurt cups, which are often produced using the FFS process, Microcell enables a 20–25% reduction in material without compromising shelf life or product protection. While polystyrene is traditionally used, polypropylene and polyester are becoming increasingly important.



left: Yoghurt cup produced with Microcell use 20-25% less plastics. Right: Microcell structure in the core layer of an FFS sheet. Pictures: Promix Solutions AG

PP Clamshell tray: lightweight and durable



In a 3-layer PP clamshell tray, the Microcell core layer forms the heart of the design. Sandwiched between two solid outer layers, it significantly improves insulation and withstands temperatures of up to 100 °C. The foam structure considerably reduces material density by 40% in this example - without compromising the durability.

Microcell PP is a sustainable alternative to polystyrene or paper-coated solutions. As a mono-material, it fully complies with the requirements of the European Packaging Regulation (PPWR) and is fully recyclable. Additionally, the process enables high-quality, cost-effective products for hot-fill applications, including disposable coffee cups.

Picture: KGL S.A.

Environmentally friendly, economical, future-proof

Microcell combines ecological benefits with economic efficiency. Through the use of environmentally neutral blowing agents, significant material savings and full recyclability, the technology paves the way for sustainable, cost-effective, and regulatory-compliant packaging solutions—today and in the future.

About Promix Solutions AG

Promix Solutions AG is the leading supplier of unique key components and solutions in the area of mixing, foaming and cooling in plastics processing and polymer production. Promix serves the industry with effective solutions for the reduction of the environmental footprint, cost savings and quality improvements in extrusion and injection molding. A motivated team with long standing experience and extensive process and application know-how ensures excellent consultancy and service. The product portfolio includes Foam Extrusion Systems, CO₂/N₂ Gas Dosing Stations, foaming and nucleation additives, Key Components for the production of Light Foams, Mixing Nozzles, Melt Blenders, Melt Coolers and Inline Viscometers. For more information: www.promix-solutions.com.

Note to editors (not for publication)

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