

Press Release



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Opening new furniture design possibilities

Breakthrough technology from Covestro and Arcesso Dynamics used to create design chair

- **Chair designed by Thomas Schnur is first to be produced using reaction injection molding (RIM) on aliphatic polyurethanes – previously considered impossible**
- **Injection molding opens new possibilities for organic and clean furniture design shapes**
- **Truly seamless material increases quality through a fusion of construction, function, and shape**
- **Chair is lightweight, and pleasant to touch**
- **Monomaterial makes chair easy to repair and recycle**

Covestro, a leading polymer manufacturer, and Arcesso Dynamics, a manufacturer of custom polyurethane parts, have used their breakthrough [Arfinio®](#) technology to realize a chair system by designer Thomas Schnur. As the first application in furniture, the Arfinio® chair demonstrates the technology's potential to revolutionize the sector by enabling lighter, truly seamless furniture with organic and clean shapes that bring together construction, function, and shape to increase visual and physical quality. Covestro will introduce the technology and showcase the chair at the [K 2022](#) plastics trade show from October 19 to 26 in Düsseldorf, Germany.

Furniture designers face limitations when working with traditional solid-surface materials. Individual pieces must be cut and glued together – a long, labor-intensive, and expensive process that makes creating complex shapes impractical.

Arfinio® provides a solution to this challenge by combining reaction injection molding (RIM) with aliphatic polyurethane chemistry – previously considered



impossible. The resulting material has the look and feel of a solid-surface material but can be produced in one piece. This enables truly seamless pieces with far fewer design restrictions; the mold can simply be adjusted to the desired shape.

The design chair is lightweight, enabling the use of less material per piece. Because of its truly seamless nature and strong resistance properties, it is also more durable. Next to this, it has excellent haptics and is warm to the touch. Finally, as a monomaterial, Arfinio® can be milled and reintroduced into new products at the end of its lifetime, helping furniture manufacturers to close the loop and reduce industry waste.

Joan Miquel García Martínez, Senior Project Manager Covestro: "This design chair is another milestone for Arfinio®. We hope it shows designers the possibilities that this technology can bring to furniture, and we're looking forward to partnering with them to bring these new designs to life! Together with Arcesso, we'll continue to bring the benefits to a wide range of industries, providing an innovative solution to the challenges created by traditional solid-surface materials."

Thomas Schnur, Thomas Schnur Design Office: "Covestro and Arcesso's new material opens extensive new furniture design possibilities. The chair using Arfinio® technology is lighter and stronger than would be possible using traditional solid-surface materials; it allows designers to fuse construction, function, and form like nature does. I'm interested to see how designers will use these benefits in other furniture and product applications!"

About Arcesso Dynamics:

Arcesso Dynamics is a Spanish medium-sized manufacturer of custom polyurethane products. It specializes in meeting the high technical requirements of demanding industries, and focuses strongly on research and development.

About Thomas Schnur:

Thomas Schnur is a German designer based in Cologne. After an apprenticeship as a cabinet maker, he studied product design at the University of Applied Sciences Aachen. At that time, he worked for designers such as Mathieu Lehanneur in Paris and studied at École Supérieure d'Art et Design de Saint Étienne. His work has been shown on numerous stages of design including IMM Cologne, Maison et Objet Paris, Salone del Mobile Mailand, ICF New York, and Beijing Design Week. Since 2016, Thomas is teaching at Ecosign in Cologne, and has been a guest lecturer at HBK Saar, UdK Berlin, and Kunsthochschule Kassel.



About Covestro:

Covestro is one of the world's leading manufacturers of high-quality polymer materials and their components. With its innovative products, processes and methods, the company helps enhance sustainability and the quality of life in many areas. Covestro supplies customers around the world in key industries such as mobility, building and living, as well as the electrical and electronics sector. In addition, polymers from Covestro are also used in sectors such as sports and leisure, cosmetics and health, as well as in the chemical industry itself.

The company is committed to becoming fully circular and is striving to become climate neutral by 2035 (scope 1 and 2). Covestro generated sales of EUR 15.9 billion in fiscal 2021. At the end of 2021, the company had 50 production sites worldwide and employed approximately 17,900 people (calculated as full-time equivalents).

Forward-looking Statements

This news release may contain forward-looking statements based on current assumptions and forecasts made by Covestro AG. Various known and unknown risks, uncertainties and other factors could lead to material differences between the actual future results, financial situation, development or performance of the company and the estimates given here. These factors include those discussed in Covestro's public reports, which are available at www.covestro.com. The company assumes no liability whatsoever to update these forward-looking statements or to conform them to future events or developments.