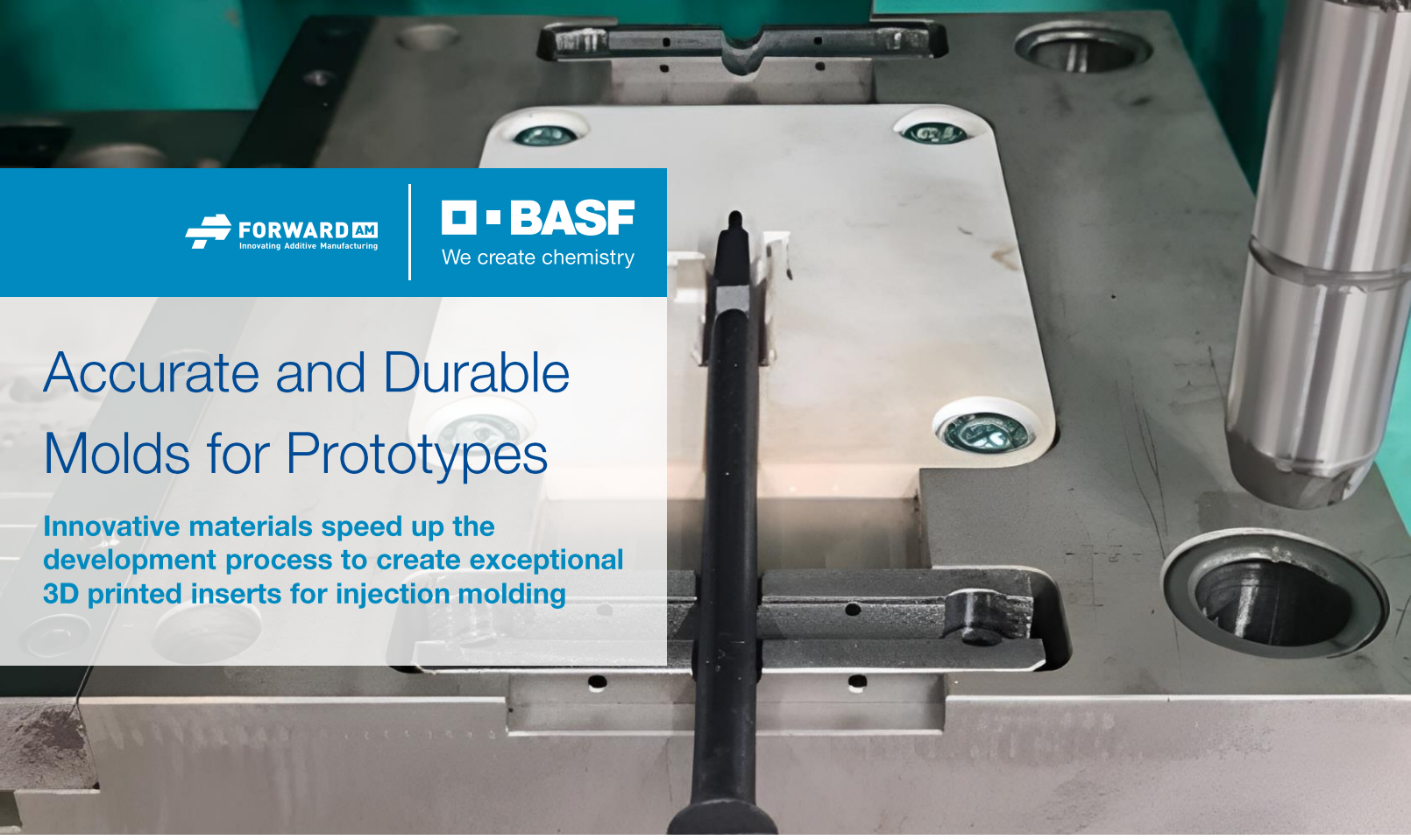


FORWARD AM Innovating Additive Manufacturing | BASF We create chemistry

Accurate and Durable Molds for Prototypes

Innovative materials speed up the development process to create exceptional 3D printed inserts for injection molding

OVERVIEW

MD ELEKTRONIK analyzed methods for rapid tooling to speed up the development of injection molded products. To better serve their customers, MD ELEKTRONIK collaborated with BASF Forward AM and ProductionToGo to determine that Ultracur3D® RG 3280 was a superior choice for 3D printed mold inserts. When compared with competitor materials, the results demonstrated that mold inserts printed with BASF Ultracur3D® RG 3280 produced overmolded parts of near-series quality.

QUICK FACTS

Materials:

- Ultracur3D® RG 3280

Technology:

- LCD

Partners:

ProductionToGo

nexa3D

MD ELEKTRONIK is an automotive supplier with over 30 years of experience in the industry. They specialize in customizing data cables and electronic modules for a fast, secure, and reliable transmission of data in vehicles.

More than 60 OEMs worldwide rely on MD and their products are integrated into more than 350 car models globally.

With a total of over 6,000 employees at locations in Germany, the Czech Republic, Bulgaria, China, Mexico and the USA, MD is very well positioned to support customers on all continents with the mobility of tomorrow.

WWW.MD-ELEKTRONIK.COM

Resulted in cost savings of 5000€

Reduced production time from 6 to 10 weeks to 3 to 4 days

Challenge: Implement a technology to speed up the development process for highly accurate overmoldings

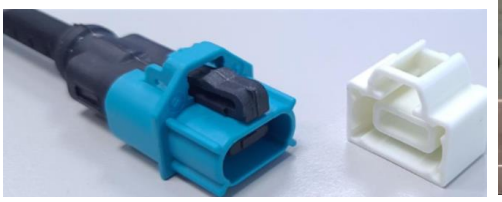
The prototypes required for this project needed to be overmolded in series material and include functional electronics/contacts. After comparing several different materials, it was concluded that Ultracur3D® RG 3280 was the number one choice to meet the project requirements.

The material provides excellent printability on the 405nm by Nexa along with high imaging accuracy. Ultracur3D® RG 3280 creates molds with high strength, stiffness, thermal stability and pressure resistance. Within 90 minutes, more than 60 quality parts were produced with little to no wear on the mold inserts.

With the development speed accelerated, MD ELEKTRONIK was able to utilize this innovative material to reduce technical risks, making it a game-changing technology that will now be the standard in their rapid prototyping portfolio.

"The technology achieved the requirements for early prototype production and enabled us to check our product geometry and discover potential failures before we invested in an expensive mold. This meant we could eliminate production defects in the steel mold, therefore reducing the number of correction/optimization cycles."

-- Markus Kaaserer, Expert Techno Polymers, MD ELEKTRONIK



Challenge: Reduce both production time and costs

By utilizing this innovative material along with Additive Manufacturing technologies, MD ELEKTRONIK could quickly produce the overmoldings needed allowing for a quick prototyping process of functional electronic overmolded components from 3D imaging to finished product in as little as three to four days. They were also able to reduce costs and save over 5000€ in production overheads.

Learn more about Ultracur3D® RG 3280:

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