

igus® launches new laser sintering material for 3D printers

The new iglide i6-BLUE laser sintering powder is highly abrasion-resistant, self-lubricating, and food-safe according to FDA

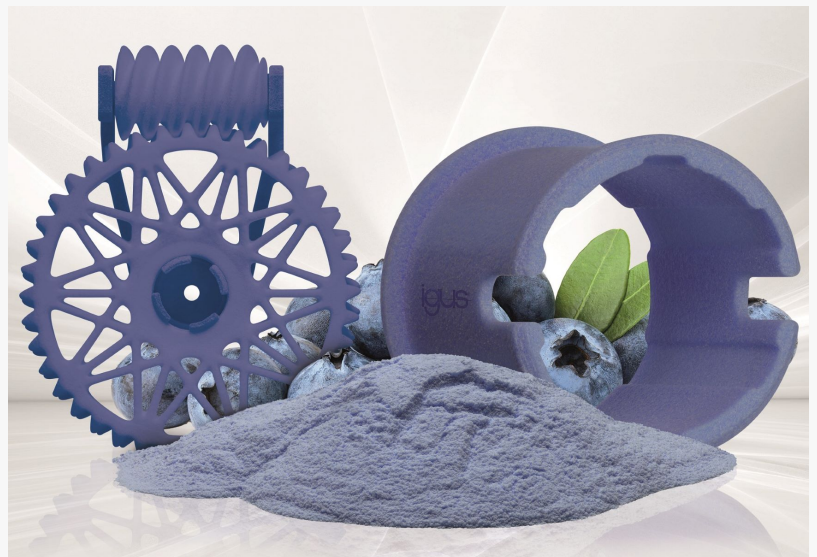
STAMFORD, CONNECTICUT, UNITED STATES, October 5, 2022

[/EINPresswire.com/](https://www.einpresswire.com/) -- igus®, the Germany-based manufacturer of motion plastics, is launching a new laser sintering material for 3D printers. The powdered iglide® i6-BLUE is easy to detect thanks to its blue coloring and complies with FDA and EU 10/2011 regulations. The new material thus increases the safety of machines and systems in the food and beverage industry. iglide i6-BLUE is in no way inferior to the proven iglide i6 in terms of strength and sliding properties and is particularly suitable for printing worm gears, toothed gears, and snap-on connections in 3D.

Fast production, low costs, and high design flexibility

Manufacturers of machines and systems for the food and beverage industry have long used 3D printers as an alternative to conventional

technologies, such as turning and milling. More and more design engineers want blue printing material. The color blue is easy to see and therefore increases food safety. If a 3D-printed component breaks, blue fragments in the product are easy to see and can be quickly identified



The iglide i6 laser sintering material, which is food-safe according to FDA and EU 10/2011 regulations, is now also available in blue, ensuring the required optical detectability in applications in the food and beverage industry. (Source: igus GmbH)

with detectors.

The problem is that there are still very few blue printing materials on the market that are robust and food-compliant for the selective laser sintering manufacturing process.

"To meet the high demand, we have now developed iglide i6-BLUE, a blue-colored printing powder compatible with all common laser sintering printers," says Tom Krause, Head of the igus Additive Manufacturing Business Unit. "The blue, high-performance plastic is easy to detect and is also food-compliant. Unlike conventionally manufactured laser-sintered components, iglide i6-BLUE complies with US Food and Drug Administration (FDA) and EU 10/2011 regulations."

The component is unique because it is entirely blue and doesn't just have colored surfaces. This ensures that all possible fragments are blue and, therefore, easy to detect.

At least nine times as abrasion-resistant as PA12

Thanks to its unique material composition, iglide i6-BLUE is also tough and abrasion-resistant with excellent sliding properties, making it especially suitable for printing worm gears and toothed gears in 3D that are intended for machines in the food and beverage industry. The material is resistant to temperatures between -40°C and +80°C.

"Tests in our in-house laboratory have also shown that 3D-printed gears made of iglide i6-BLUE have a much longer service life than milled wheels made of polyoxymethylene (POM) and are at least nine times as abrasion-resistant as PA12 (SLS)," says Krause.

Due to the high elongation at break, the laser sintering printing material is also suitable for the additive manufacturing of snap-on connections. In addition, iglide i6-BLUE increases the hygiene of machines for the food and beverage industry. Microscopic solid lubricants are integrated into the laser sintering material and released automatically during movement, allowing low-friction dry operation. This eliminates the need for lubricants, which attract dust and dirt and can become a contamination risk.

Available with the 3D printing service in just seven days

Machine manufacturers who do not have their own 3D printer can use the igus 3D printing service - with no minimum order quantity. All they have to do is submit a 3D model of their component. The laser sintering printer then produces it in layers from the new iglide i6-BLUE printing material - this works significantly faster than traditional manufacturing technologies, such as turning or milling.

"For special components, prototypes, and series of up to 10,000 pieces, we can reduce delivery time from several weeks to seven days," says Krause. "More and more customers are grateful to accept this deal in the face of faltering supply chains worldwide."

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ABOUT IGUS:

igus GmbH develops and produces motion plastics. These self-lubricating, high-performance polymers improve technology and reduce costs wherever things move. In energy supplies, highly flexible cables, plain and linear bearings, and lead screw technology made of tribo-polymers, igus is the worldwide market leader. The family-run company based in Cologne, Germany, is represented in 35 countries and employs 4,900 people across the globe. In 2021, igus generated a turnover of €961 million. Research in the industry's largest test laboratories constantly yields innovations and more user security. Two hundred thirty-four thousand articles are available from stock, and service life can be calculated online. In recent years, the company has expanded by creating internal startups, for example, ball bearings, robot drives, 3D printing, the RBTX platform for Lean Robotics, and intelligent "smart plastics" for Industry 4.0. Among the most important environmental investments are the "change" program – recycling of used e-chains and participating in an enterprise that produces oil from plastic waste.

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