

Roboze Bio-based PA: high performance at lowest carbon footprint on the 3D printing market

Roboze, Tech Company specialized in additive manufacturing for metal replacement with innovative materials, at Formnext 2022 presents the first high-performance bio-based 3D printing material

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Bio-based PA. This is the name of the first high-performance bio-based material for 3D printing that will be the protagonist of the next Formnext 2022. This technopolymer originating from renewable sources is the first result of intense research for the development of super materials of the future by [Roboze](#), a company specializing in the design and manufacture of industrial 3D printing solutions for metal replacement, and was produced with a bio-based matrix reinforced with natural fibers.

Sustainability is the necessary prerequisite for lasting progress for people and the planet; investing in the research and development of diversified solutions that can satisfy the various stages of development and production of goods is one of the strategic choices for obtaining answers and proposing corrective actions to current business methods and models. Roboze, Tech Company specialized in industrial 3D printing for metal replacement with high performance polymers and composites, is convinced of this. The company has developed a technology that brings additive manufacturing on a par with conventional methods by achieving its first goal, which is to enable a new production model based on the distribution of micro-factories around the world that use [Roboze's Production technology](#). The model brings economic, social and environmental benefits, given the reduction in transport resulting from on-demand local production.

The company announced it a few weeks ago, with the start of work on the opening of a cutting-edge research center dedicated to the research and development of super materials that can accelerate the transition to sustainable manufacturing. At Formnext 2022, the international trade fair based in Frankfurt am Main, Germany, focused on smart industrial production, will present the first result of this commitment in hall 11 at booth C21: Bio-based PA, polyamide for high performance 3D printing composed of a matrix reinforced with natural bio-based fibers.

“Bio-based PA was born from the combination of Roboze's commitment to develop high-performance eco-sustainable products, with the creativity and technological skills of the R&D team” explains Dr. Simone Musso, PhD, Head of Materials Science, in charge of leading the research and development of new materials at Roboze.

Roboze Bio-based PA offers excellent performance in terms of low hygroscopicity, excellent retention of mechanical properties after water absorption, and excellent dimensional stability. In addition, the printed parts show an excellent glossy black surface.

With the same specification and performance, but with 60% lower CO2 emissions than a carbon fiber-reinforced petroleum-based PA, this new PA will enable manufacturing companies to move closer to their sustainability goals and contribute to a better future for the planet.

Furthermore, the 3D printing process also contributes to the reduction of emissions as the production of components with the Roboze Bio-based PA, such as jigs & fixtures, can take place in a cold chamber and with a reduction in extrusion temperatures.

Last but not least, Roboze's Bio-based PA is fully recyclable because both the reinforcement and the polymer are natural and bio-based and therefore recyclable.

“At Roboze, we want to revolutionize the world of manufacturing, but with an eye on the environment” concludes Dr. Musso.

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About Roboze

Roboze is re-shaping the manufacturing industry and revolutionizing the world of 3D Printing with the most precise technology, capable of processing super polymers and composite materials for the realization of finished functional parts to be used in the most extreme conditions and sectors. The Roboze Automate technological ecosystem includes advanced 3D printing solutions for high temperature and high-strength super polymers and composites, developed in collaboration with the world's top players. It ensures true cost and time optimization throughout the supply chain, integrating elements of industrial automation on par with traditional manufacturing. To date, Roboze is used in more than 25 countries and is recognized as one of the fastest growing 3D printing companies in the world, serving industry leaders such as GE, Leonardo, the U.S. military, and many others

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