



Roboze introduces a new ground-breaking super polymer to the 3D printing sector

The leader in super polymers and composites 3D printing introduces a new high temperature composite material reinforced with chopped fibers of ceramic to introduce new possibilities in motorsport, space and energy

BARI, ITALY – FEBRUARY 14, 2022 – As a demonstration of its continued commitment to the research and development of new metal replacement solutions for industrial 3D printing, Roboze today announced another important evolutionary step in materials science by introducing its new PEEK matrix composite: Helios™ PEEK 2005.

With the aim of offering new performance and application opportunities to its customers, Helios™ PEEK 2005 is a PEEK matrix composite material filled with ceramic. The new filament offers greater stability at high temperatures and increases the finished surface of parts printed with Roboze 3D printing solutions. The ceramic phase has smaller dimensions when compared with the more common carbon and glass fibers; making Helios™ PEEK 2005 ideal to produce components with complex geometry, characterized by thin walls. The monocrystalline nature of the reinforcement allows the elimination of grain boundaries and the minimization of crystallographic defects, maximizing its effectiveness. This feature is also fundamental for accelerating the time-to-market of end users as it offers a reduction in post processing times of over 60% compared to other super polymers and composites. Due to the intrinsic low thermal conductivity of the ceramic reinforcement, Helios™ PEEK 2005 exhibits high thermal insulation properties even when exposed to operating temperatures above 170°C. The printed parts are light, with a low electrical conductivity, suitable for applications where the insulation characteristic is a fundamental technical requirement.

“At Roboze, we have seen great strides with the use of our 3D printing technology in sectors including aerospace, energy and motorsports. We work closely with many of these regulated industries, supporting the integration of additive manufacturing technology from prototype to production.” says Simone Cuscito, CTO at Roboze. *“Helios™ PEEK 2005 derives precisely from the needs of these industries and is an excellent candidate for applications that require specifications of lightness, mechanical strength and heat resistance.”*

With the superb printability of Helios™ PEEK 2005, combined with Roboze 3D printers, the most accurate and repeatable solutions in the world, Roboze allows for the production of high-quality components for regulated industries, who are always looking for new solutions to replace metal.

The new Roboze filament will be available in March on the Roboze 3D Parts Marketplace, the company's on-demand 3D printing service. This is supported by a network of specialized centers, distributed around the world and equipped with the Roboze 3D printing technology, recognized today as the only additive manufacturing system in the world capable of guaranteeing production scalability.

Additional information will be shared during [the next webinar](#), organized by the Roboze team, scheduled for March 17th, 2022 at 10am CDT/5pm CET .

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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 on demand for finished

functional parts for extreme applications in industries that include aerospace, oil and gas, energy, manufacturing and mobility sectors.

The Roboze high technical ecosystem includes a complete range of advanced 3D printers for high-temperature and high-strength super plastics, developed with the collaboration of the best global players. It guarantees a real optimization of costs and time along the entire supply chain, while bringing additive manufacturing closer to the standards of traditional manufacturing.

Furthermore, Roboze offers the possibility to produce customized finished parts On Demand and Just-in-Time through its manufacturing as a service global network, Roboze 3D Parts, which allows companies to reduce costs and time by shortening the steps of their supply chain and digitizing their inventory.

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