

BigRep Launches New Flexible Filament for 3D Printing: PRO FLEX a “First” for Large-Scale FDM Industry

Berlin, 4 April 2018. BigRep today releases its latest filament innovation, which is a first for the large-scale FDM industry globally – a flexible material with engineering-grade properties for a various of applications.

The new TPU-based material “PRO FLEX” opens up a wealth of possibilities for manufacturers and customers, to use a flexible engineering material that has been expertly developed and tested to work in connection with BigRep’s largest industrial 3D printer, the [BigRep ONE](#), on its standard 1 mm extruder.

PRO FLEX has high temperature resistance, as well as commendably low temperature impact resistance. The durable material has excellent damping behavior and dynamic properties, enabling companies to explore a broader range of manufacturing opportunities.

For the automotive industry, it enables prototyping for gear knobs, door handles, cable sheathing and more. The sporting goods industry could also foreseeably benefit, as Pro FLEX allows prototyping of skateboard wheels, sporting shoe shells, ski tips and ends.

BigRep’s Chief Technology Officer Moshe Akinin is excited about the number of parts and applications that PRO FLEX will make possible, saying, “Printing elastomers is clearly one of the biggest challenges in the FFF AM industry, so we are proud to have found an industrial-grade solution. In terms of applications with PRO FLEX, we see high potential for 3D printing in fields like footwear, custom vibration dampers, and seals, due to its high chemical resistance.”

In developing the innovative thermoplastic elastomer, which is a Shore 98 A on the Shore Hardness scale, BigRep analyzed how elastomers behave in its machines’ extruders and achieved the end result by adapting its material evaluation procedure accordingly.

BigRep advises that customers be experienced in handling extrusion of flexible materials, as they can be more challenging than most. BigRep will provide a guidance document to all PRO FLEX customers, and as part of the BigRep 360-degree service, customer service technicians are also on hand to assist where necessary.



About BigRep

BigRep is a technology start-up based in Berlin with offices in Boston, New York and Singapore, which develops and manufactures the world's largest 3D printers. One of the ground-breaking developments of the company founded in 2014 is the BigRep ONE, which is supplemented by the smaller BigRep STUDIO. Interdisciplinarity and well-founded experience in the field of additive manufacturing characterizes the multinational team of BigRep, now comprised of more than 90 employees. In addition to new products, the Berlin company is now concentrating on complete solutions for industrial customers in the form of integrated additive manufacturing systems. The goal of the highly innovative engineering company is to revolutionize design, prototyping and industrial production from the ground up.

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