Carbon® Introduces RPU 130, its Latest Innovation in Advanced Materials

At K Trade Fair, Carbon debuts a groundbreaking new benchmark material, featuring Susterra® propanediol by DuPont Tate & Lyle.

REDWOOD CITY, Calif. (PRWEB) October 10, 2019 -- Next week at the International K Trade Fair in Dusseldorf, digital manufacturing company Carbon will debut its latest innovation in materials, a new resin called RPU 130. With an unprecedented combination of properties, RPU 130 fills the need for a tough, rigid, and high temperature additive manufacturing material suitable for rigorous applications in industries such as automotive. RPU 130 is also partially derived from plants, addressing the growing demand for more sustainable, high-performance materials.

Rigid polyurethane is Carbon’s most versatile rigid material family. Carbon developed RPU 130 to address the need for superior impact resistance and dimensional stability at elevated temperatures that no additive material could address. In addition to automotive, RPU 130 is highly relevant for a wide range of industrial and consumer product applications such as air ducts and brake caliper covers for vehicles, sunglasses, tool housings, and device enclosures. RPU 130 combines some of the best characteristics of Carbon’s RPU 70, FPU 50, and EPX 82 resins into a single, tough, heat and impact resistant material, similar to ABS, unfilled nylon, or polypropylene.

“Our materials team at Carbon is second to none, and RPU 130 represents a true breakthrough in what is possible for new additive materials,” said Dr. Joseph DeSimone, Co-Founder and CEO of Carbon. “Although some of these properties have been available before in additive, RPU 130 is the first to combine them all into a single manufacturing material suitable for the most demanding conditions. We are really proud of the science that went into bringing this innovative material to market.”

RPU 130 is the latest dual-cure engineering resin made exclusively for Carbon Digital Light Synthesis™ technology, at the heart of a new comprehensive solution. Its combination of performance attributes makes this new material wholly unique for additive manufacturing and more comparable to unfilled thermoplastics.

Producing RPU 130 required innovations in not only material science, but also software and hardware. In addition to the new dual-cure resin, Carbon is offering a new heated C5 Cassette required for use with the material, a new dispensing solution, and tuning via software to ensure great end-use products.

In addition to new hardware and software components, RPU 130 was made with environmentally sustainable raw materials. Carbon partnered with DuPont Tate & Lyle Bio Products to use Susterra® propanediol, a 100% bio-based building block that delivers high performance across a wide variety of polymers, coatings, and ink applications. Compared with conventional petroleum-based alternatives, Susterra® propanediol produces 48% less greenhouse gas emissions and uses 46% less nonrenewable energy from cradle-to-gate. Nearly 30% of RPU 130 is composed of this plant-based material. Going forward, Carbon is firmly committed to building on this work by continuing to expand efforts to achieve more sustainable practices through the use of advanced, high-performance, bio-based materials like Susterra® propanediol.

“We are focused on ways to incorporate more sustainable approaches to developing materials, and our partnership with DuPont Tate & Lyle emphasizes that commitment. We believe that sustainability can go hand-in-hand with improved performance. In the case of RPU 130, we believe it will make the material even more
appealing for our customers, as it makes it possible to create better quality products that are also ultimately better for the environment,” said Jason Rolland, SVP of Materials at Carbon.

"With the launch of RPU 130, Carbon is upping the ante yet again by bringing high quality and top performing digital manufacturing to the industrial and automotive markets, and we are thrilled that Carbon chose Susterra® propanediol to help make this happen," states Steve Hurff, VP of Marketing & Sales at DuPont Tate & Lyle Bio Products. "In addition, Susterra® propanediol, a USDA Certified 100% Bio-based product, enables a lower carbon footprint compared to petroleum-derived materials, making it a win-win for consumers."

Carbon RPU 130 is available via Carbon’s resin store starting today in the USA, Canada, and Europe. To learn more about RPU 130, please stop by Carbon’s booth at K-Show from October 16-23 located at H7.2, F12.

About Carbon

Carbon’s mission is to reinvent how polymer products are designed, engineered, manufactured, and delivered towards a digital and sustainable future. Based in Silicon Valley, Carbon brings together innovations in software, hardware, and material science to deliver industry-leading digital manufacturing solutions. With Carbon’s ground-breaking Digital Light Synthesis™ technology and broad family of programmable liquid resins, manufacturers can unlock new business opportunities such as mass customization, on-demand inventory, and previously impossible product designs. The Carbon Platform allows customers to build uniquely differentiated products while reducing waste and time to market. To learn more, visit https://www.carbon3d.com, like the Carbon Facebook page, or follow Carbon on Instagram and Twitter at @Carbon.

About DuPont Tate & Lyle Bio Products

DuPont Tate & Lyle Bio Products is a joint venture between DuPont, a global science company, and Tate & Lyle, a world-leading renewable food and industrial ingredients company. DuPont Tate & Lyle Bio Products provides natural and renewably sourced ingredients that enhance product performance. For more information on Susterra® propanediol, visit http://www.SusterraPerforms.com to see the solutions we offer across a wide variety of markets and applications.
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