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Evonik's new INFINAM® FR 4100L 3D printing resin designed for manufacturing tough, ductile, flame-retardant parts

- Certified UL 94 V-0 flame retardancy rating at 3mm
- Fire, smoke and toxicity (FST) rated
- Liquid at room temperature
- Superior elongation at break

Marl, Germany. Evonik has launched a new photopolymer resin that is both flame retardant and mechanically durable when cured. Designed for use with DLP (digital light processing) 3D printers, INFINAM® FR 4100L is pourable at room temperature and can be printed and further processed to achieve a desired surface feel.

"INFINAM® FR 4100L is our latest product to address ongoing customer demand for a 3D-printable resin that can meet the unique requirements of aerospace, automotive, and electronics applications," says Vitor Lavini, head of Market Segment Photopolymers at Evonik's High Performance Polymers business line. "Fundamental to these market segments are parts that can withstand contact with sparks, flames, and various types of fuels."

INFINAM® FR 4100L has a certified UL 94 flame retardancy rating of V-0 at 3mm thickness. Once cured, the resulting product features high elongation at break, good haptics, and an excellent surface finish that can be further machined and polished. It also exhibits a level of toughness similar to materials made of ABS (acrylonitrile butadiene styrene) plastic.

"Evonik is committed to developing innovative solutions that meet the needs of our customers," says Dominic Stoerkle, head of the Additive Manufacturing Innovation Growth Field at Evonik.

"INFINAM FR 4100L is a perfect example of our commitment to innovation and customer centricity. We believe the unique properties of this product will be well suited for 3D printed prototype and functional production parts in the most demanding aerospace, automotive, and other industrial applications," says Stoerkle.

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Evonik's experts will be on hand to discuss this and other innovative additive manufacturing products at Booth P12 in Salon D during the 2024 Additive Manufacturing Users Group (AMUG) Conference, from March 10 to 14 in Chicago, USA.

Evonik's activities to support 3D printing technology are consolidated under the company's Additive Manufacturing Innovation Growth Field. The strategic goal is to develop and produce industrial, high-performance materials that are ready to use for all major polymer-based 3D printing technologies. As a result, the specialty chemicals company is advancing 3D printing as a large-scale industrial manufacturing technology across the entire value chain.

For more information on Evonik's INFINAM portfolio, please visit: <https://www.infinam.com/en>

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Company Information

Evonik is one of the world leaders in specialty chemicals. The company is active in more than 100 countries around the world and generated sales of €18.5 billion and an operating profit (adjusted EBITDA) of €2.49 billion in 2022. Evonik goes far beyond chemistry to create innovative, profitable, and sustainable solutions for customers. About 34,000 employees work together for a common purpose: We want to improve life today and tomorrow.

About Smart Materials

The Smart Materials division includes businesses with innovative materials that enable resource-saving solutions and replace conventional materials. They are the smart answer to the major challenges of our time: environment, energy efficiency, urbanization, mobility and health. The Smart Materials division generated sales of €4.83 billion in 2022 with about 7,900 employees.

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