



Semplastics awarded \$1.4 million contract from the Department of Energy to create new uses for coal waste

Contract to be used to develop commercially-useful components from coal waste

ORLANDO, Fla. (August XX, 2020) – Semplastics and its Advanced Materials Division X-MAT® have been awarded \$1.4 million in funding by the Department of Energy for a cost-shared research project to develop high-strength, commercially-useful components made from coal waste.

“One person’s trash is another person’s treasure’ is a saying our team has taken to heart,” said Bill Easter, founder of Semplastics and X-MAT®. “We’re working to create a circular economy where we take coal waste materials and turn them into something remarkable. We’re already seeing great progress with prototypes.”



This coal waste project could very well lead to progress on the ultimate dream for X-MAT® technologies – to construct a house completely from coal-derived building materials. One day, people will be able to live in a safer, more durable home with everything from the front stoop to structural walls to the roof tiles on top made out of coal and its waste products.

“X-MAT®’s revolutionary technologies are coal reimagined,” said Easter. “Our vision for the re-use of coal and coal waste products is a major reason why the Department of Energy is interested in our R&D. We’re transforming an old energy product into something that will one day be used in all types of commercial businesses and potentially even residential architecture. In total, we’ve received \$4 million in grants and contracts for our efforts to safely use coal in new ways.”

Semplastics and X-MAT® are working in concert with the University of North Dakota Energy and Environmental Research Center (EERC) and Center for Applied Research and Technology (CART) in West Virginia on this project.

The company also has several other coal and coal waste projects in the works. X-TILES™ are the company’s ecofriendly roof tile that are lightweight, fireproof and can withstand extreme temperatures. Using a patent-pending X-MAT® coating technology, Semplastics is also on the edge of a breakthrough combining coal with waste graphite to create a lithium ion battery anode, which has more energy capacity than never-used graphite.

This new contract is just the latest in funding support from the DOE National Energy Technology Laboratory (NETL). The NETL has also awarded Semplastics and X-MAT® a \$1.5 million grant for the X-TILES™ and a nearly \$1 million contract to help fund the research for turning coal into battery materials.

About Semplastics

Semplastics, a Florida-based material engineering company, launched in 2000. Over the last 20 years, Semplastics has supplied plastic engineered components to a broad range of industries from medical to aerospace. The Advanced Materials Division of Semplastics, X-MAT®, was later formed in 2013. Since inception, X-MAT® has developed a revolutionary, high-performance material that combines properties of metals (electrical conductivity), engineering plastics (lightweight) and ceramics (high operating temperature). Semplastics has held partnerships with NASA, Space Florida and the Department of Energy. Its game-changing material has various current applications including fireproof roof tiles, lightweight space mirrors, battery electrodes and 3D printing ceramics. Semplastics' technology can be custom-engineered to fit many specifications and has unlimited potential market applications. To learn more about Semplastics and X-MAT®'s capabilities and future projects, visit their websites at <https://semplastics.com/> and <https://www.x-materials.com> or call (407)353-6885.

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