X-MAT® uses revolutionary material to create fireproof, eco-friendly roof tiles

X-MAT® exceeds performance of commercial ceramic roof tiles

ORLANDO, Fla. (Jan. 17, 2019) – X-MAT®, the Advanced Materials Division of Semplastics, is completing their work on a Phase 1 SBIR grant with the Department of Energy. During this phase, X-MAT® developed a ground-breaking fireproof roof tile that exceeds industry standards. Their roof tiles can withstand extreme temperatures and have higher flexure strength than currently available ceramic roof tiles.

X-MAT®'s revolutionary material, a composite made of polymer derived ceramic, when mixed with coal, enables the coal to be used without burning it to create coal core-composite. With their coal core-composite, they have produced fireproof roof tiles that have high durability with a reduced energy footprint.

X-MAT®'s fireproof roof tiles have extraordinary properties that combine the best attributes of common materials including:

- Higher flexure strength than ceramic roof tiles
- Lighter weight than Teflon
- High operating temperatures of ceramics

This new invention could transform the roofing and coal industries and if manufactured, could support the creation of jobs in the coal regions and jumpstart domestic manufacturing of ceramic tiles.

"We are thrilled with our progress on the development of revolutionary roof tiles that far exceed the industry standard for fire protection and strength," said Bill Easter. "In a world with more ferocious national disasters – we are on a path to producing a roof tile that is environmentally friendly and meets the demands for the changing world."

This grant has allowed X-MAT® to build the next generation of roof tiles for the solar industry. The next step for X-MAT® is continuing their work to enhance their roof tiles and expand upon their mission to create an eco-friendly solution for the roofing and coal industries.

X-MAT® looks forward to expanding the applications of their X-MAT® material with continuing projects supported by the DOE.

About X-MAT®

X-MAT®, the Advanced Materials Division of Semplastics, launched in 2013. X-MAT® developed a revolutionary high performance material that combines some of the best properties of metals (electrical conductivity), engineering plastics (lightweight) and ceramics (high operating temperature). X-MAT® has had several partnerships including work with NASA, Space Florida and the Department of Energy. X-MAT®'s game-changing material has various current applications including fireproof roof tiles, lightweight space mirrors, battery electrodes and 3D printing ceramics. With X-MAT®, the possibilities are endless. X-MAT® technology can be custom-engineered to fit many specifications and has unlimited potential market applications. To learn more about X-MAT® capabilities and future projects, visit their website at https://www.x-materials.com or call (407)353-6885.

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