

Saving Building and Infrastructure FRP Products from Fire Event Failure

Disruptive fireproofing innovation offers unique protection against hazards of failure, smoke and toxic fumes generated when FRP ignites.

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/EINPresswire.com/ -- ALEC² Saves Building and Infrastructure FRP Products from Fire Event Failure

The patent pending ALEC² ceramic composite material has introduced a disruptive innovation in fireproof structural insulation for the commercial and residential building industries. Paving the way for a new fireproofing safety standard for structural insulation products, ALEC² is

a major improvement, overcoming the effects of high heat and fire on the critical components of building products made with FRP.



Structural Insulation

This fireproofing innovation, unlike the FRP based product available on the market, offers unique protection against fire hazards, smoke, and toxic fumes. With these primary benefits, ALEC² sets the stage for a safer, circular and more sustainable future for building construction and infrastructure.

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The ALEC² technology reflects our commitment to provide unequaled benefits of fireproof, circularity and sustainability into the composite materials ecosystem.”

*Bill Hayward, President of
WT&C*

The Impact of Fire on FRP Materials and Products Used in Construction

The popularity of FRP materials in structural and architecture applications is on the rise around the globe. Made of a polymer matrix toughened with fibers, FRP products have been used to replace steel and wood in certain building and infrastructure applications. However,

fire and high heat can cause catastrophic failures in the strength and performance of any FRP product. As a result, FRP is a flammable material that will contribute negatively to a fire event by producing:

- Additional Heat
- Toxic Smoke
- Harmful Volatiles

ALEC² provides a superior option for replacing the traditional insulation materials used in multiple industries today. It is emerging as a game-changer composite technology in the structural insulation and fireproofing materials industry for shielding FRP products from the often catastrophic impacts of fire events. ALEC² properties prevents the weakening and eventual destruction of FRP products and components.

The ALEC² composite technology, in addition to negligible expansion or contraction during a fire, includes the following benefits:

- Unparalleled Fire Proof Safety: Help to protect people and critical assets from fire damage and hazards.
- Improving the Environment: This lightweight technology is 100% circular, sustainable, and recyclable.
- Non-Combustible: Zero burn rate and zero risk of fire spread no smoke or and toxic fumes – the 100% opposite to FRP's dangerous and potentially life threatening reactions to fire.
- Protecting Structural Integrity: Keeping a building's FRP materials' strength and chemical bonds intact in fire events with its extremely low thermal conductivity.

ALEC² protects FRP products to maintain structural properties even when faced with fire and intense heat to maintain the longevity of FRP and related critical infrastructure. Made with ~85% recycled industrial waste material available worldwide (excluding Antarctica). ALEC² is a disruptive and innovative technology offered through intellectual property licensing agreements. Being the only 100% circular, sustainable and recyclable composite in the industry, ALEC² has 1/5 the density of aluminum and 1/3 the density of most FRP composites, making it the best material technology option for fireproof protection of FRP products, infrastructure and/or as a discrete structural insulation product.

The fireproof and sustainable features of ALEC² offer incomparable possibilities across various insulation product applications in building construction, where it already is changing the way people perceive fire safety while helping improve the environment. Acting as a fireproof wall, ALEC² allows infrastructure projects to achieve a level of fire protection unsurpassed by current incumbent insulation materials. Protecting both human lives and valuable assets from fire hazards with a ZERO burn rate is a unbeatable combination for a composite material.

In addition to being fireproof and 100% circular, ALEC² combines lightweight and structural

benefits into a unique ceramic composite insulation technology option.

About WT&C

WT&C in collaboration with ARIS, the patent pending inventor of the ALEC² technology, is engaged to review global opportunities for the right to use commercial licensing of the ALEC² intellectual property.

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