

NEWS RELEASE

For immediate release – May 14, 2021

BarrierTek completes successful burn experiment that will change the building industry

LEDUC, AB – On Wednesday, May 12th, 2021, BarrierTek initiated a first of its kind in Canada, large-scale burn experiment. The company performed a full-scale field test at a local fire training facility designed to demonstrate the efficacy of BarrierTek products – a made-in- Alberta invention that promises to defend wood structures – against nature's most devastating force, fire. Further to this, the demonstration provided empirical results that will greatly benefit the wood construction industry and enhance the work of fire prevention professionals on a provincial and national level.

The large-scale burn experiment provided a comparative analysis between two three-story wood buildings – one constructed with BarrierTek fire-proof coating and the other, untreated standard construction. Both buildings were identical in construction and were ignited with an equal amount of fuel-load. Untreated wood buildings are at risk of catastrophic fire both during and after construction and this experiment demonstrated that structures treated with BarrierTek coatings eliminate that risk. BarrierTek treated structures do not allow fire to leave the point of origin, dramatically reducing fire damage and posing absolutely no threat to the surrounding community or any adjacent buildings.

“At BarrierTek, we deeply care about the safety of our communities and we are passionate about influencing the built environment by developing high-performance, fire-resistant products. This experiment is our chance to show the industry and our communities that fires are a preventable tragedy and an opportunity to change the wood construction industry for the better. We hope that this one-of-a-kind demonstration will give the industry, code developers, and the general public a sense of real-life impact and demonstrate how each building is assessed for damage,” says Mike Baker, CEO of BarrierTek.

Due to current COVID-19 restrictions, this demonstration will be broadcasted as a virtual event. Government officials, industry professionals, business leaders and the general public are invited to observe the demonstration virtually on June 16th at 11:00am. For more information about the event and to register, please visit:

<https://www.barriertek.com/sciencevsfire>

B-roll footage and photography from the experiment is available exclusively to media at:

<https://www.barriertek.com/media/>

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About BarrierTek

BarrierTek is a science-driven company based in Leduc that envisions a world without catastrophic fires. Since 2010, the company has been at the forefront of developing fire protectants for wood structures. BarrierTek works directly with builders, code officials and fire prevention officers to develop innovative and cost-effective fire-retardant coatings and applications that exceed fire code requirements. More information about the company, can be found at www.barriertek.com

FACT SHEET

What is the product? BarrierTek coatings are factory-applied fire protectants designed to reduce flame spread in wood buildings. The coatings are applied to wood products much like you would apply a paint. All coatings are non-toxic, non-carcinogenic and non-off gassing and safe to handle.

How does the product work? Oriented Strand Board (OSB) used in wood construction is extremely flammable owing to the adhesives binding the wood chips together in the panel. When sufficient heat and oxygen are present, the OSB will ignite and start a combustion cycle. Our product interrupts the combustion cycle by reducing the amount of heat and oxygen that can get to the OSB. When the product is heated to ~200C, a chemical reaction begins, and a low-density foam occurs. This foam char layer slows the heat transfer and prevents oxygen from reaching the board.

Third party validation of experiment: LRI Fire Engineers, Fast and Epp Structural engineers, and PTW Instrumentation were retained to validate the experiment data. These groups confirmed that the buildings and fuel cribs (ignition source) were identical in construction and provided independent data capture from the experiment.

Results of experiment: For BarrierTek, the outcome of the experiment was a huge success and clearly demonstrated the applicability of this new product in eliminating catastrophic fire.

The **BarrierTek treated building** did not ignite, reaching a maximum temperature of 230 °C. Fire Department personnel extinguished the fuel crib at 35:00 from ignition so that the building could be entered and inspected. A total loss of approximately \$10K was estimated as damage, most of which was from smoke.

The **untreated building** reached flashover – a term used to describe the point in which every combustible surface exposed to thermal radiation rapidly and simultaneously ignites – at 24:30 from the point of ignition. The maximum temperature in this experiment peaked at 1240 °C and flashover normally occurs when the upper portion of the fire compartment reaches a temperature of approximately 600 °C. Fire Department personnel began to suppress the fire at 26:30 with the structure collapsing at 32:10.

Why it's important: Catastrophic fires have been claiming buildings for as long as humans have been building them. While under construction, a wood building is extremely vulnerable to fire with even the smallest event causing a total loss of the building. The fuel for a fire in a wood building is not what ignites – it is the building itself. BarrierTek products reduce flame spread and allow the fire department to extinguish these blazes as opposed to merely protecting the surrounding property. Buildings are safer. Communities are safer. Lives and property are saved.

What did it cost: Total cost to conduct the experiment on May 12th was estimated at \$225K and was 100% privately funded by BarrierTek.