

To: ThermaCote

From: Ray Fitting

Subject: 16 July test burn

This letter in does not necessarily reflects the opinion of the Georgia Fire Academy, but represents my own experience.

On 16 July I was asked to support a test burn of ThermaCote applied fire resistive coating, a product that was being exhibited at the Fire Safety Symposium being held on campus at the Fire Academy. I visited the booth and although there were some intriguing demonstration models, I was largely unconvinced of its potential effectiveness in fire conditions. The test model was a packing crate like box, roughly the size of a home refrigerator. The bottom of the crate had a hole to allow fuel to be added. The interior and exterior surfaces were coated with ThermaCote to roughly 1/10 of an inch. The material was white and although it could be dented by my fingernail, it sprang back and could not be scored, cut or pulled away by hand. The test box was loaded, by me, with fluffed excelsior and oak pallets. I loaded it heavily, as I wanted to not only give the structure itself a good thermal shock, but I wanted to generate a good bed of embers. The desire for a good ember bed was I thought the test box would collapse up in a very brief time, and I did not want to leave a large debris pile smoldering after the test. The results were more than I would have been willing to believe had I only seen the test on video rather than in person. Admittedly the test box was not very ruggedly built, fasteners were left exposed to the heat and no great care was taken to assure the seams were well covered. This allowed heat and in some cases direct flame contact to small areas of wood. Even with that it was unbelievable how the material stood up to the test. The video was shot real time and at various intervals the times were called out. Even when the flames were pushing through a seam in the structure the wood surrounding it was cool to the touch. In the final phases of the burn, when the structure was beginning to fail (due to heat leakage into joints and seams not robustly constructed) when the interior coating was compromised and fell away, as the wood burned in several places it left the *paint standing!* I look forward to seeing more testing and development and I imagine it will be a long time before the list of uses and applications is complete. Although I am no longer with the State Fire Academy I would very much like to be kept abreast of future changes and developments.

Captain Ray Fitting  
Fire Fighter  
Retired