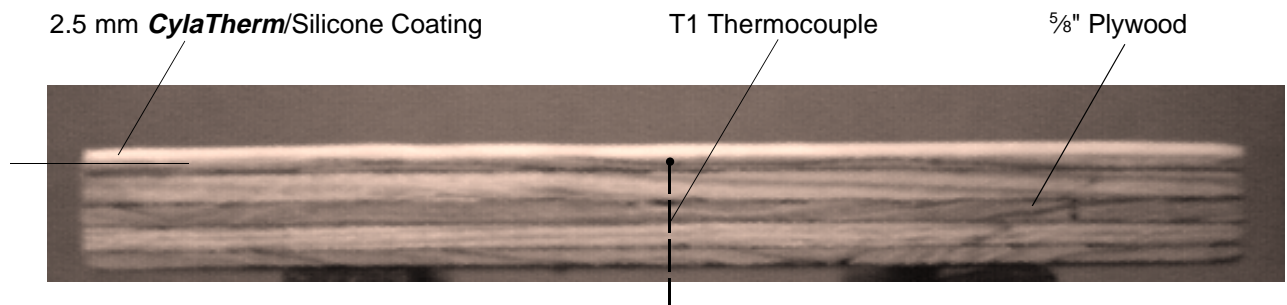


Technical Bulletin

Plywood Burn Test - 1550° For 8 Hrs.

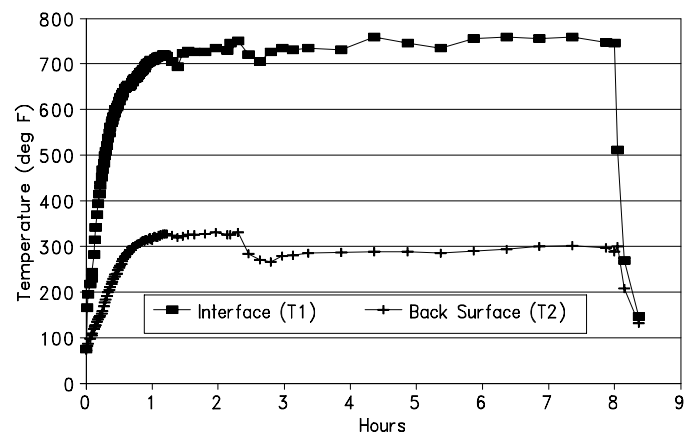
Objective: To determine the fire retardancy of a *CylaTherm*® intumescent/silicone coating on plywood.

Procedure: A surface coating consisting of 50% *CylaTherm N-30* intumescent and 50% neutral cure RTV silicone was applied to one side of a 6x6x $\frac{5}{8}$ " plywood test piece at a thickness of 2.5 mm (100 mils). A fine wire thermocouple (T1) was positioned at the interface of the coating and the plywood surface.



After curing, the test piece was positioned in a jig, coated side down, 4.5" over the top of an air/gas Bunsen burner fueled with LP gas. The burner was adjusted to produce a soft flame which impinged upon the coated surface of the test piece, yielding a temperature of 1550 to 1600°F at the coated surface. A second Thermocouple (T2) monitored the temperature on the back side of the test piece. The test was run for 8 hours. Upon cooling, the piece was sectioned and examined.

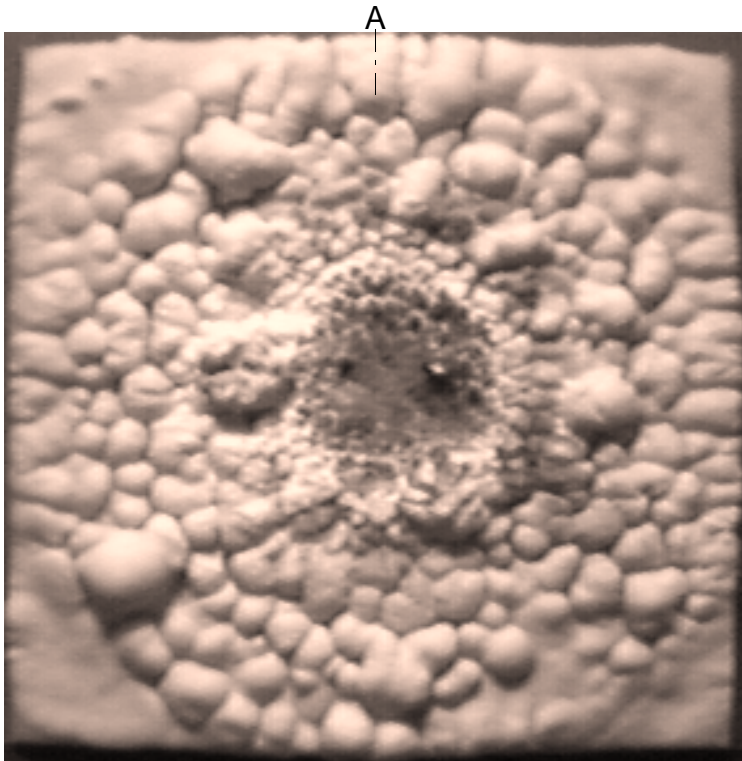
Results: As can be seen from the temperature profile graph, temperatures tended to stabilize after approximately 1 hour. Upon sectioning and examination, pyrolysis was found to have occurred to about half the depth of the plywood. On all areas of the test piece, the intumescent layer was found to be exceptionally strong, consistent and intact.



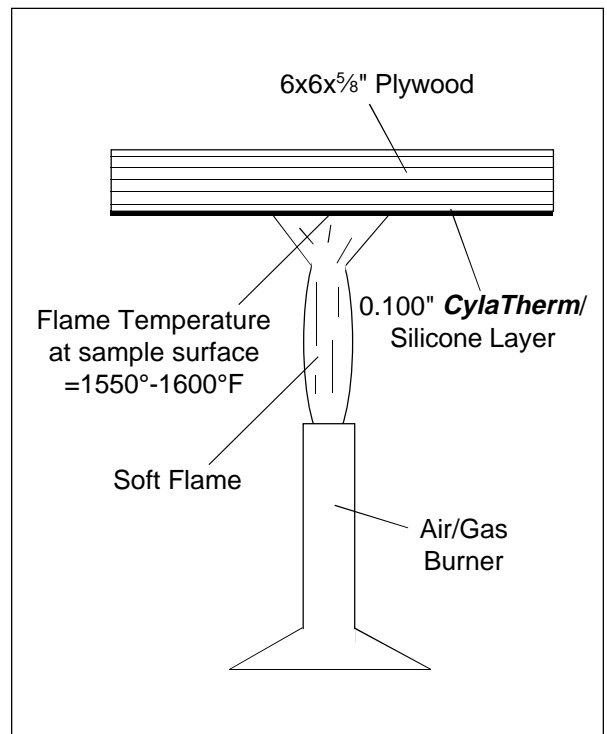
Discussion: This preliminary data suggests that a *CylaTherm* intumescent/silicone coating may be, for any given thickness, the most efficient commercial fire barrier available today. As demonstrated by this test, the protection imparted to a thermally fragile cellulosic substrate translates into tough, super effective coatings for numerous applications. With a surface melting point in excess of 2000°F, we can expect these new composite coatings to find use in steel beam protection, FR sheathing, aviation and aerospace, and in any other FR application which requires a thin, tough, resilient and waterproof coating coupled with a superior degree of fire protection.

Plywood Burn Test - 1550°F for 8 Hrs.

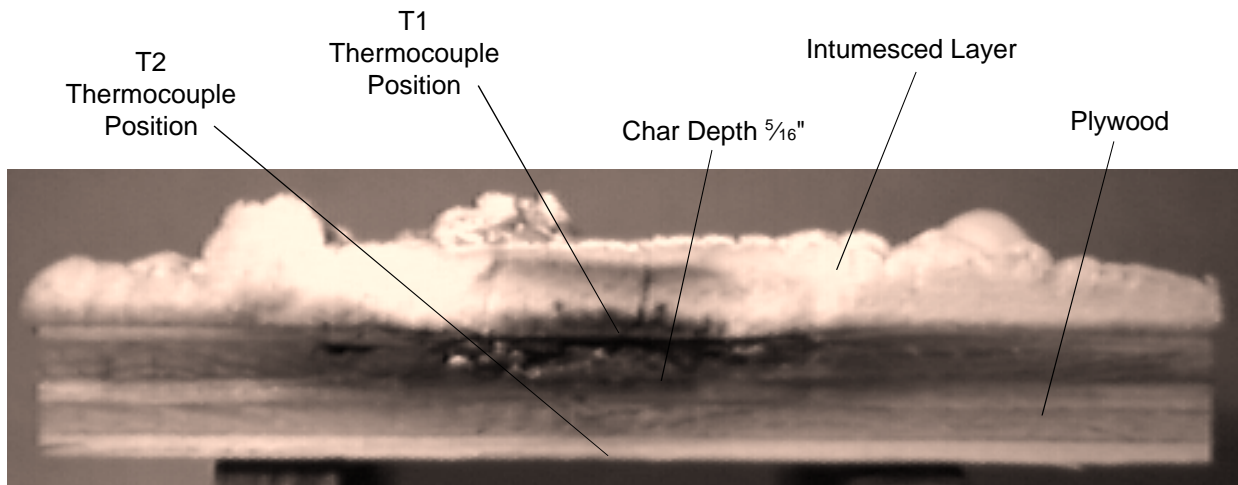
$\frac{5}{8}$ " Plywood with 0.100"(2.5mm) Coating Consisting of 50% **CylaTherm[®] N-30** Intumescent and 50 % RTV Silicone



6"x6" Coated Sample After 8 Hr. Burn



Test Configuration



Sample Cross-Section (through A) After 8 Hr. Burn



U.S. & Foreign Patents
Granted and Pending

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