



## CALIFORNIA FIRE APPROVALS FOR APA SIDING

Beginning January 2008, in compliance with the 2007 California Building Code (CBC), exterior siding used in designated Wildland-Urban Interface areas must be listed as meeting the requirements of the Office of State Fire Marshal. The two listed APA 303® panel siding groove patterns can be found in the *California Wildland Urban Interface (WUI) Products Handbook*, published by CAL-FIRE, Fire Engineering Division, Office of the State Fire Marshal (SFM). (<http://osfm.fire.ca.gov/strucfireengineer/pdf/bml/wuiproducts.pdf>) The panels complied with the provisions of APA PRP-108, *Performance Standards and Qualification Policy for Structural-Use Panels*<sup>1</sup>. The approvals are based on the results of a series of fire tests that APA sponsored at a CAL-FIRE-recognized fire test laboratory.

APA plywood siding panels listed as meeting the requirements of SFM Standard 12-7A-1 are:

- 1) "APA 303®" plywood siding with shiplap edges, nominal 19/32-inch-thick and grooves spaced 4 inches on center, manufactured with veneers of all Southern Pine or Douglas-fir face, back and center with Hemlock or Douglas-fir cross piles, 4x8 foot panel.
- 2) "APA 303®" plywood siding with reverse-board and batten, nominal 19/32-inch-thick and shiplap edges, grooves spaced 12 inches on center, manufactured with face, back and center of Douglas-fir veneers and cross ply veneers of Hemlock or Douglas-fir, 4x8 foot panel.

Both of the above panel constructions represent the constructions and wood species most commonly available in the marketplace and judged by APA to represent the types of 303 Siding panels that would have the least fire resistance in the fire test.

The decorative grooves in many 303 sidings, along with the shiplap joints, proved to be the weakest points for protecting against assault by fire. The effect of knotholes and core gaps proved to be inconsequential. Of the various grooving patterns of 303 sidings, the two tested sidings (T1-11 and Reverse Board and Batten) represent the deepest and widest grooves and have typical shiplap edges. Other 19/32-inch-thick and thicker 303 sidings will be more resistant to fire than either of these two patterns because they either have no grooves or because the depth of those grooves is less, thereby leaving more wood in place to slow the advance of any fire through the panel. Based on char rates and principles discussed in Harmathy's *Design to Cope with Fully Developed Fires*<sup>2</sup>, thicker wood can be expected to resist fire longer than thinner wood and will therefore also pass the SFM Standard 12-7A-1 test.

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Based on the above, all APA T1-11 303 plywood siding panels that are 19/32-inch-thick or thicker, have shiplap edges, have grooves spaced no closer than 4-inches o.c. and PS 1 Douglas-fir/Larch, and Southern Pine wood species will pass the SFM Standard 12-7A-1 test. In addition, all APA 303 Plywood Reverse Board and Batten siding panels that are 19/32-inch-thick or thicker and are made with PS 1 Douglas-fir/Larch face, back and centers and with cross plies of Western Hemlock or denser PS 1 Western species and spaced a minimum of 12 inches o.c. will also pass the SFM Standard 12-7A-1 test.

<sup>1</sup>APA, PRP – 108, *Performance Standards and Qualification Policy for Structural-Use Panels*, Tacoma, WA, 2001

<sup>2</sup>Harmathy, T.Z., *Design to Cope with Fully Developed Fires, Design of Buildings for Fire Safety*, American Society for Testing and Materials, Philadelphia, PA, 1978

Technical Services Division

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