



## Fire Rated Assemblies – Specification of Wood Structural Panels

Architects and engineers specify fire-rated wall, floor and roof assemblies extensively in structures where one- and two-hour fire protection is required. Many fire-rated assemblies specified and built today were originally tested and approved with plywood as the floor covering. Because APA often supplied panels for tests, some specifications still list APA-rated panels as the approved sheathing in these assemblies. In 2000, engineers at Underwriters Laboratories (UL) of Northbrook, Illinois, determined that OSB of an equivalent thickness could be substituted for plywood in these designs. Going one step further, UL revised its UL Fire-rated Assemblies to no longer limit use of structural panels to those of a single certification agency. The revision, sponsored by TECO, was necessary because original language appeared to exclude the use of plywood and OSB panels unless certified by APA. While never intending to restrict panel use to a single agency, UL recognized this language as exclusionary and modified the assembly designs to include the use of all panels meeting U.S. Department of Commerce PS 1 and PS 2 standards.

The new, revised language was included in the 2000 edition of the *UL Fire Resistance Directory*. Subsection 14 *Wood Structural Panels* under the General Section (Section II) at the beginning of Volume I (Fire-resistance Ratings – ANSI/UL 263) includes, in part, the following:

*Wood structural panels are structural panel products composed primarily of wood and meeting the requirements of the U.S. Department of Commerce Voluntary Standard PS 1, “Structural Plywood”<sup>1</sup> or the U.S. Department of Commerce Voluntary Product Standard PS 2, “Performance Standard for Wood-Based Structural-Use Panels.” Wood structural panels include all-veneer plywood, composite panels containing a combination of veneer and wood-based material, and mat-formed panels such as oriented strand board and waferboard. The panels bear the label of a code-recognized certification organization with a specific reference to the PS 1 or PS 2 standard. The panels shall also be marked “Exposure 1” or “Exterior.” Some individual designs may limit the type of panel that can be used.*

In addition, all references to trade names were removed from the individual design assembly descriptions and replaced with more generic terminology. Examples include:

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<sup>1</sup> The UL Fire-rated Assemblies Directory references PS 1 as “Construction and Industrial Plywood” rather than the current designation of “Structural Plywood” (PS 1-09).

- "19/32-in. thick wood structural panels, min. grade "C-D" or "Sheathing." Face grain of plywood or strength axis of panels...."
- "23/32-in. thick wood structural panels, min. grade "Underlayment" or "Single-Floor." Face grain....."

The *UL Fire Resistance Directory* is available from Underwriters Laboratories by calling (847) 272-8800 or online at this link: [UL Fire Resistance Directory](#).

