

Wood Structural Panels and Phytosanitary Control

The export and import of wood products creates the potential that unwanted organisms, such as insects, are also transported, thereby creating a risk of infestation. To reduce this risk, various national and international regulatory bodies develop phytosanitary control measures for the import/export of woody materials.

The possibility of insect infestation from wood structural panels, such as structural plywood and oriented strand board (OSB), is greatly diminished by the manufacturing processes. The result of the various wood structural wood panel manufacturing processes destroys organisms that may be present in the wood before processing. This destruction is assured by a number of severe environments that the raw materials experience during the manufacturing process. These environments of typical manufacturing are briefly described below:

- Prior to processing, logs are typically cured in hot water or high temperature steam chambers to facilitate the veneer cutting or strand generation process.
- For veneer production, the logs are then inserted in a high speed lathe and veneers (from 1/10 to 3/16 inch thick) are cut. The strands used in OSB are cut by a series of high speed knives that slice off strands that are approximately 0.025 inch thick.
- Veneer is dried at temperatures between 325°F and 350°F. The veneer stays in the dryer for 6 to 15 minutes. Strands, on the other hand, are dried at temperatures of 600°F to 1200°F as it passes through a rotary or screen dryer.
- The veneers are then assembled into plywood blanks and pressed at 150 to 210 psi at press temperatures of 325° to 375°F until the panel is elevated to a minimum of 220°F at the core of the panel. This temperature is maintained for a minimum of two minutes to ensure adequate glue bond. Similarly, OSB panels are pressed at 500 to 700 psi and 375° to 400°F for three to six minutes.

During production of structural plywood and OSB, the wood used to fabricate the panel is elevated to temperatures above 212°F at least twice during the manufacturing process. Literature indicates that organisms die at 165°F and physically break down at 212°F, the boiling point of water. Therefore, the manufacturing process for wood structural panels mitigates the risk of insect or fungal infestation of the finished panel. Of course, infestation may occur after manufacturing whether in storage, transit, or in situ (installed).

PHYTOSANITARY REGULATION ISPM 15

The *Regulation of Wood Packaging Material in International Trade* developed by the International Standards for Phytosanitary Measures, also known as ISPM 15, describes phytosanitary measures that reduce the risk of introduction and spread of pests associated with the movement in international trade of wood packaging material made from raw wood. The standard is widely adopted internationally because the standard is considered to significantly reduce the spread of pests and subsequently mitigates their negative impacts on forests and the environment. The standard specifies heat treating or treating with methyl bromide as primary means of meeting the standard.

Because of the aforementioned manufacturing conditions involved with manufactured panels, ISPM 15 provides the following exemption applicable to structural plywood and OSB (emphasis added):

2.1 Exemptions

The following articles are of sufficiently low risk to be exempted from the provisions of this standard:

- wood packaging material made entirely from thin wood (6 mm or less in thickness)
- ***wood packaging made wholly of processed wood material, such as plywood, particle board, oriented strand board or veneer that has been created using glue, heat or pressure, or a combination thereof***
- barrels for wine and spirit that have been heated during manufacture
- gift boxes for wine, cigars and other commodities made from wood that has been processed and/or manufactured in a way that renders it free of pests
- sawdust, wood shavings and wood wool
- wood components permanently attached to freight vehicles and containers.

In summary, structural plywood and OSB are exempt from ISPM 15 due to the manufacturing process that has rendered the product to be considered low risk.

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