

TECHNICAL BULLETIN

OSB Subfloors Under Hardwood Flooring

Oriented Strand Board (OSB) is an engineered structural wood panel primarily used for floors, walls and roofs. As a subfloor under solid wood strip and laminated flooring, OSB provides an enduring, rigid platform. OSB's success today is evident in its recognition and acceptance by many leading hardwood flooring manufacturers and the major hardwood flooring associations. The true value of an OSB subfloor comes from its versatility, dependability, and performance. Knowing how to handle and install OSB as a subfloor will ensure your satisfaction and the satisfaction of your home buyer or client.



Photo courtesy of Bruce Hardwood Floors

OSB POLICY STATEMENT

The National Wood Flooring Association and the National Oak Flooring Manufacturers' Association have issued official policies on the use of hardwood flooring over OSB. Both associations recognize $2\frac{3}{32}$ " or thicker OSB panels certified to U.S. D.O.C. Voluntary Product Standard PS2 as an acceptable underlayment for nail-down wood strip flooring under prescribed conditions. Today, most hardwood floor manufacturers accept and approve OSB as a qualified subfloor for nail-down installations.

PANEL SELECTION

OSB subfloor panels normally have tongue-and-groove edges. Select the appropriate thickness and span rating for the application – either single-layer subfloor/underlayment or a subfloor to be covered with an approved underlayment. Although model building codes provide for thinner thicknesses, the Flooring Associations and SBA recommend a minimum panel thickness under $\frac{3}{4}$ " wood strip flooring range of $2\frac{3}{32}$ " over joist spacings up to 19.2". Look for span ratings of Single-Floor 24, Structural I Sheathing $4\frac{8}{24}$, or Sheathing $4\frac{8}{24}$.



Structural Board Association
Representing the OSB Industry

OSB & MOISTURE

Anytime you prepare a job site for the installation of a wood floor, it is important to use a moisture meter to check that the moisture content of the OSB is approximately ten percent or less. A number of moisture meters are now available that work with OSB. Cyclical changes in moisture – from wet to dry to wet, etc. – can jeopardize wood flooring installations by causing permanent gapping or cupping in the finished hardwood floor. If the moisture content exceeds 10 percent, let the subfloor dry out or install a moisture barrier such as 15 lb. felt building paper over the OSB before installing the hardwood strips. As for OSB over crawl spaces, the crawl space must be dry and well ventilated. Check with the local building authority as to crawl space venting and vapor barrier requirements.

INSTALLATION

SBA, its OSB manufacturers, and building codes set out specific installation instructions for installing OSB subfloors. Wood flooring manufacturer guidelines dictate specific installation requirements for their products to be warranted with OSB. Deviation from these instructions and guidelines may result in a voiding of the warranty. Generally, proper installation of OSB floor systems include the following recommendations.

Make sure to keep the panel side marked “This Side Down” on supports when using T&G panels. OSB panels should not be butted tightly; leave 1/8" gaps on all sides to allow for normal linear expansion. Check that the subfloor is level, paying particular attention to the panel edges. It must be

completely nailed or screwed to the joists. Do not place fasteners less than 3/8" from panel edges and never use drywall screws. Screwing and gluing OSB to the floor joist systems will stiffen the floor and help eliminate squeaking. Some manufacturers recommend that the T&G edges should also be glued together. Prior to laying finished wood flooring, OSB floors must be dry (ten percent moisture content or less), free of debris, with no joints or nail heads protruding.

Also, the crawl space must be dry, the basement floor poured, all concrete cured, moisture from drywall and paint allowed to dissipate and all doors and windows in place.

After the subfloor has been properly prepared and the work area enclosed, the hardwood strip flooring should be professionally installed by a certified flooring installer.

REMINDER

Most hardwood flooring is delivered dry (six to ten percent moisture content) to the job site and should be placed in the area where it will later be installed for at least a week so that it may become acclimatized to the existing indoor humidity conditions.

Hardwood floors will respond to changing humidity conditions in the home or building. This can translate to gaps between boards in the dry season or heaving and buckling during the wet season. Proper installation of the subfloor and the strip flooring, along with the proper care of the floor after installation, will minimize any impact to floor performance or appearance.



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Wood Panel Bureau
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