



WOOD FLOORING INSTALLED OVER EDGE®, EDGE GOLD™ AND DIAMOND™ OSB FLOOR PANELS IN JOIST FLOOR CONSTRUCTION

Weyerhaeuser Edge®, Edge Gold™ and Diamond™ oriented strand board (OSB) flooring panels are high-quality structural panels, considered some of the best OSB products on the market. They are manufactured by combining precisely cut wood strands with controlled amounts of wax and resin, which are then pressed together under high temperatures to form panels maximized for strength, stiffness, and stability. Edge, Edge Gold and Diamond floor panels feature limited warranties against delamination. Edge Gold panels include a limited 200-day no-sand warranty and Diamond panels include a limited 500-day no-sand warranty. Reliability of performance is the reason for Edge, Edge Gold and Diamond floor panels' proven success as an ideal solution under hardwood flooring.

A Proven Product

Leading wood flooring manufacturers and major wood flooring associations recognize OSB as a proven substrate material for wood flooring applications. OSB is more resource efficient, structurally consistent, and less prone to delamination than plywood.

The National Wood Flooring Association (NWFA) recommends $2\frac{3}{32}$ performance category or thicker OSB panels for use under wood flooring.

**NWFA Installation Guidelines⁽¹⁾
recommend at least $2\frac{3}{32}$
performance category panels for
floor joists spaced 19.2" o.c. or less,
and $\frac{7}{8}$ performance category
panels for floor joists spaced 24" o.c..**

Adequate substrate material is only one of many factors to consider when installing wood flooring. Proper floor preparation and structural support, moisture acclimation, and quality installation practices are also critical elements in any successful wood flooring application.

Installation Guidelines

Most building codes, along with a number of industry associations, have published specific guidelines for installing OSB floor panels. Many wood flooring manufacturers have also established specific installation requirements and will only warrant their product if it has been installed per those specifications. In general, most guidelines for proper installation of an OSB floor system, and the wood flooring installed over it, include the following recommendations:

- To minimize moisture issues, the basement floor should be poured, all concrete and drywall should be cured, and all doors and windows should be in place prior to installing wood flooring. The crawlspace must be kept dry (i.e., properly drained

with a vapor barrier ground cover installed) both prior to and after installation. If installing during warm months, the building must be well ventilated; during the winter months, heating should be maintained near occupancy levels.

- Use Edge, Edge Gold or Diamond floor panels that are at least $2\frac{3}{32}$ performance category. Verify that floor joist spacing meets the wood flooring manufacturer's recommendations. NWFA Installation Guidelines⁽¹⁾ recommend at least $2\frac{3}{32}$ performance category panels for floor joists spaced 19.2" o.c. or less, and $\frac{7}{8}$ performance category panels for floor joists spaced 24" o.c.. See the following table:

Recommended OSB floor panel thickness

Joist Spacing (in.)	Minimum OSB Performance Category
$S \leq 19.2$	$2\frac{3}{32}$
$19.2 < S \leq 24$	$\frac{7}{8}$
$24 < S \leq 32$	$1\frac{1}{8}$

- To increase floor stiffness and help prevent squeaks, vibrations and bounce, glue the panels to the joist in addition to nailing or screwing. Weyerhaeuser recommends using a subfloor adhesive that has been qualified as a Class 1/8 in., Type P/O subfloor adhesive in accordance with ASTM D3498-19 (see [TB-131](#)).
- When installing the floor panels, leave a $\frac{1}{8}$ " gap at all the ends and edges of each panel to allow for normal expansion. The tongue-and-groove profile on Edge, Edge Gold and Diamond floor panels automatically gaps the long edge of the panel. For improved

The overall design of a floor system — including joist depth, spacing, and type of floor panel used — plays a significant role in the success of a wood flooring installation.

performance, the tongue-and-groove edges can also be glued together.

- For panels 1" thick or less, use 8d (0.131" x 2½") nails to completely fasten the panel to the joists. For panels thicker than 1", use 10d (0.148" x 3") nails. Screws of an equivalent root diameter and length may be used instead of nails. When fastening with screws, Weyerhaeuser recommends using screws from a manufacturer that can provide an ICC-ES Evaluation Report. Do not use drywall screws.

Keep all fasteners at least ⅜" from panel edges. Recommended maximum fastener spacing is 6" o.c. along supported panel edges and 12" o.c. along intermediate supports (joists) in the panel field, unless specified otherwise.

- As the floor panels are installed, make sure they stay flat (no high or low spots) and sand any raised joints. Lightly countersink protruding nail heads and re-nail areas of the floor panels as needed to help eliminate nail pops and potential squeaks. With screws, tighten heads slightly into panels to ensure panels are securely fastened against framing.
- Prior to laying the wood flooring, OSB floor panels should be free of debris and dust. They should also be dry, with a moisture content of not more than 4% over the expected in-use average moisture content of the flooring. See the following table:

Average Yearly MC for Wood in Various North American Regions⁽²⁾

Region	Average MC Range of Wood (%)
Coastal	8–12
Inland	6–10
Drier Climates	5–9

- Wood flooring is generally manufactured to a moisture content (MC) of 6%–9%, but it can

absorb moisture from humid air when in storage and during shipping. Therefore, schedule delivery of the flooring only after the house has dried. Unwrap flooring and allow it to acclimate in the home with the HVAC system operating, in accordance with the manufacturer's recommendations and NWFA Installation Guidelines, prior to installation.

During installation follow manufacturer recommendations and NWFA Installation Guidelines for acceptable differences in MC between floor panels and acclimated flooring. **Typically, the difference in MC should be no more than 4% for solid wood strips less than 3" wide or parquet wood flooring, and no more than 2% for planks 3" and wider or end-grain flooring.** A pin-type moisture meter can be used to check MC of floor panels and hardwood.

- Once the floor panels are properly prepared, the work area is enclosed, and wood flooring is acclimated, it should be installed by a professional following the recommendations of the flooring manufacturer and NWFA Installation Guidelines⁽¹⁾.

While these guidelines will help ensure a successful wood flooring installation, the overall design of a floor system—including joist depth, spacing, and type of floor panel used—plays a significant role as well. For additional information on installing Weyerhaeuser Edge, Edge Gold or Diamond floor panels, visit weyerhaeuser.com. In cases where a higher performance floor system is desired, call your Weyerhaeuser sales representative for design assistance.

References

1. *Wood Flooring Installation Guidelines*, National Wood Flooring Association, 2019, nwfa.org.
2. *Managing Moisture and Wood, Building Performance Series No. 6*, Canadian Wood Council, 2004.



For more information about storage, safety, and installation of Edge, Edge Gold and Diamond floor panels, see the Technical Resource Sheet, *Floor, Roof and Wall Panel Installation (OSB-4004)*, or contact your Weyerhaeuser representative.

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