

WHY 7/8" EDGE GOLD™ ENHANCED FLOOR PANELS



Code Compliance

Cool Enough for Energy

Energy losses in homes can be substantial. According to the U.S. Department of Energy, **ductwork in unconditioned spaces can account for a 20-40% loss in cooling/heating capacity and increase energy costs by 15%.**¹ 2018 IECC sets considerable goals to eliminate distribution system losses in residential and commercial buildings.²

As builders respond by moving ductwork from an unconditioned space into the floor cavities, 7/8" Edge Gold enhanced floor panels over joists spaced at 24" on centers creates an ideal space to meet this challenge for the building community. Material usage is also optimized by the use of deeper TJI® Joists with the capacity for larger hole cutting to accommodate HVAC ductwork.

Hardwood Flooring's Recommended Option

Although 23/32" panels are span-rated for floor framing systems spaced at 24" on-center, the National Wood Flooring Association (NWFA) requires a thicker subfloor to reduce deflection of the subfloor and minimize pops and squeaks in the wood flooring. Therefore, **the NWFA recommends using a 7/8" minimum floor panel performance category³ such as Edge Gold enhanced floor panels for floor framing systems spaced at 24" on center.**

In addition, 7/8" panels have a **20% increase over 23/32" panels in fastener withdrawal capacities** assuming similar installation conditions.

Performance*

Better Performance for Tile

One of the most overlooked characteristics of successful tile installation is the tile industry's expectation for sufficient stiffness in the underlying wood framing. Due to point loads from heavy objects like refrigerators, tile installations require more stiffness from subfloor panels than the typical L/360 code required deflection limit. In APA's Technical Topics: Ceramic Tile Over Wood Structural Panels Floors (Form No. TT-006C), they provide minimum load capacities for **two-layer wood residential tile assemblies** included in the Tile Council of North America Handbook (TCNA).

Most tile assemblies require two flooring layers – a subfloor to support the load and an underlayment layer. To provide more stiffness to support the assembly, **7/8" Edge Gold is a great choice and exceeds minimum stiffness recommendations.** Compared to a 23/32" OSB panel, **7/8" Edge Gold enhanced floor panels are more than twice as stiff, producing less than half the expected subfloor curvature between joists, which can help prevent tile and grout cracking.** Continue to use a suitable underlayment as recommended by TCNA. See APA's publication for more information.

L/360 Uniform Load Capacity (PSF) of Residential Floor Panel Systems*

Nominal Subfloor Thickness	Normal Orientation, Strength Axis Perpendicular to Supports		
	16" o.c.	19.2" o.c.	24" o.c.
APA Recommendation	550	450	250
7/8"	1064	582	282

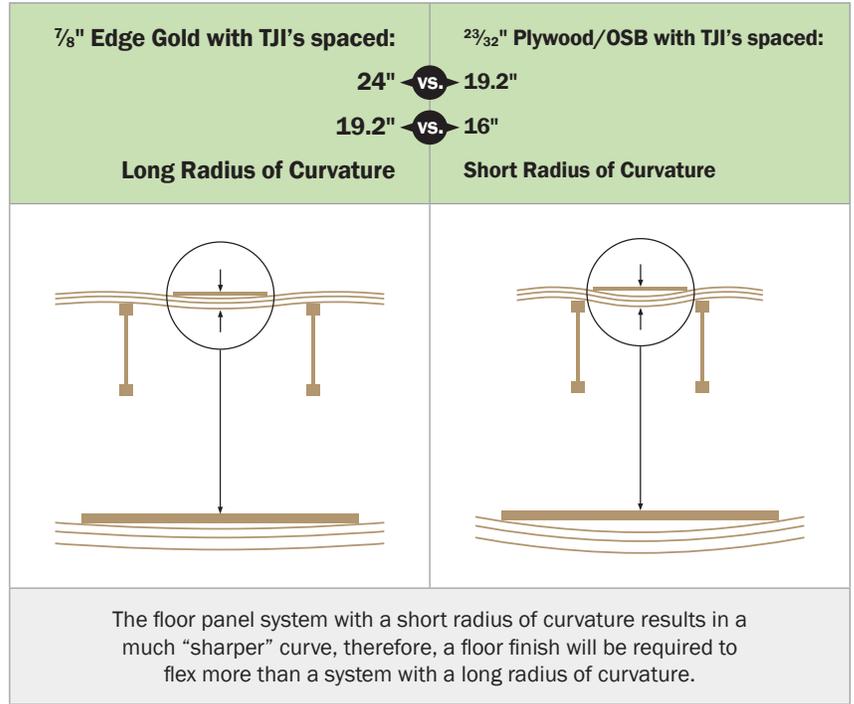
*Based on APA publication Technical Topics: Ceramic Tile Over Wood Structural Panel Floors, Form No. TT-006C.



Floor Panel Deflection and Curvature

Specification of thicker Edge Gold™ enhanced floor panels can result in less panel deflection and therefore a longer radius of curvature of the floor panel between joists, even when floor joists are designed at greater on center spacing. The result of specifying thicker Edge Gold™ floor panels can be a “flatter” floor system, which results in less flex of the finished flooring material as well as a more economical floor system with fewer TJI® Joists.

The diagram to the right illustrates the typical effect on two floor systems, both featuring TJI® Joists. The floor system on the left uses 7/8" Edge Gold™ enhanced floor panels with TJI Joists spaced at 24" on center while the floor system on the right uses 23/32" Douglas fir plywood/OSB subfloor with TJI® Joists at 16" on center. The 23/32" Douglas fir plywood subfloor illustrated on the right results in a much shorter radius of curvature and therefore a less flat floor.



Cost Effective

Spacing engineered wood floor joists 24" on center can reduce the number of joists required by 30 percent as compared to conventional 16" floor joist spacing. In many cases 7/8" Edge Gold™ enhanced floor panels can result in a marginal price increase or even reduce the costs of a floor system by creating the flexibility to use floor joists with wider on-center spacing.

EDGE GOLD ENHANCED FLOOR PANEL BENEFITS

- Limited 50-year warranty against delamination
- Limited 200-day no sand guarantee
- Easy-fit tongue-and-groove
- Every panel ships working-side up
- Engineered to stay flat
- Reduced callbacks
- Reliable delivery



**No sanding.
No delamination.
We guarantee it.**



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(1) Modera, Dr. Mark (2014). Remote Duct Sealing in Residential and Commercial Buildings: Saving Money, Saving Energy and Improving Performance [PowerPoint Slides] Retrieved from Lawrence Berkeley National Laboratory, State Energy Advisory Board; (2) www.energystar.gov/partner_resources/residential_new/program_reqs/mfr/program; (3) NFA Installation Guidelines; (4) Tile Council of North America, Interior Floors Over Wood.