



PRODUCT DATA

ADVANTECH

X-FACTOR®

MANUFACTURER

Huber Engineered Woods LLC

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BASIC USE AND APPLICATIONS

AdvanTech X-Factor® subflooring panels are high-performance engineered panel designed to replace plywood and commodity oriented strand board (OSB) floor sheathing. X-Factor panels are manufactured for enhanced moisture resistance when compared to plywood and commodity OSB. X-Factor subflooring far exceeds the code minimums for wood-based structural panels. AdvanTech X-Factor panels are substantiated by third-party evaluation services for published design values for strength, stiffness and fastener-holding power above PS 2 minimums. ESR-1785 documents design values for panels above commodity-grade panels. Please see ESR-1785* for published design values for AdvanTech panels. X-Factor subflooring is nailed or screwed to floor framing members. Using a polyurethane or solvent-based subfloor adhesive is recommended for optimal performance. Long edges of the panel have precision tongue and groove profiles, and the bottom of the panel is fully sanded. AdvanTech X-Factor functions as a combination structural floor sheathing and Class II vapor retarder for applicable finished flooring applications*.

*AdvanTech design values are published in ESR-1785.
*X-Factor is recognized as a Class II vapor retarder as published in ESL-1561 for finished flooring applications where required.

AVAILABLE SIZES AND RATINGS

X-Factor subflooring panels are available in nominal 4' x 8' sheets* in the following DOC PS 2 Single Floor span ratings and nominal thicknesses. Panels are Exposure 1 rated.

Span Ratings, Grades and Thicknesses of AdvanTech X-Factor Panels

| Span Rating | AT-Series | PFS TECO Grade ¹ | Nominal Panel Thickness |
|-------------|-----------|-----------------------------|-------------------------|
| 24 o.c. | AT 1.05 | Structural 1 Floor Span® | 23/32 inch |
| 48 o.c. | AT 1.05 | Structural 1 Floor Span® | 1-1/8 inch |

¹Third-party independent compliance testing of X-Factor subflooring performed by PFS TECO.
*Area face dimensions are approximately 47 1/2" x 95 7/8".

AdvanTech X-Factor Benefits

| | |
|-------------------------------------|--|
| Superior Design Strength | Provides a quality, stiff floor |
| Superior Design Stiffness | Outperforms plywood and commodity OSB subflooring to minimize floor bounce and squeaks |
| Superior Moisture Resistance | Minimal swelling and delamination |
| Higher Density | Greater nail and screw-holding power |
| Class II Vapor Retarder | Vapor permeance of 0.1-1 Perm in accordance with ASTM E96 |

AdvanTech X-Factor Physical Properties*** vs. OSB/Plywood****

| Bending Stiffness, EI (lbf-in ² /ft) | AdvanTech X-Factor: | OSB: | Plywood: |
|--|---------------------|---------|----------|
| | 383,800 | 300,000 | 330,000 |
| Bending Strength, FbS (lbf-in/ft) | AdvanTech X-Factor: | OSB: | Plywood: |
| | 1,250 | 770 | 770 |

***For 24 o.c. span rated panel, primary strength axis. For design capacities, section properties, and equivalent-specific gravity values of X-Factor, refer to ICC-ES ESR-1785.

****For 24oc OSB and plywood values, refer to 2012 APA Panel Design Specification.

GENERAL SUSTAINABLE DESIGN CONTRIBUTIONS

- Low-Emitting Material: No added urea formaldehyde or VOC constituents
- Sustainable Forestry Initiative (SFI) Certified Wood: Harvested, transported, manufactured and distributed utilizing sustainable practices
- Renewable Forest Resources: Composed of primarily young-growth, bio-based resources
- Regional Materials: Manufactured at our Virginia, Oklahoma or Georgia production facilities
- Regional credits are available for one of the four regional manufacturing facilities in Crystal Hill, Virginia; Easton, Maine; Broken Bow, Oklahoma; Commerce, Georgia

POTENTIAL LEED CREDIT CONTRIBUTION

- Credit IEQ 4.4 Low-Emitting Materials, Composite Wood and Agrifiber: AdvanTech contains no added urea formaldehyde
- Credit MR 5.1 or 5.2 Regional Materials: Materials harvested, processed and manufactured within 500 miles of project site
- Credit MR 2.2 Environmentally Preferable Products: Local Production (LEED for Homes)

SUBSTRATE

Before beginning installation, verify framing is properly spaced and aligned to support panel edges. Install X-Factor subflooring in accordance with:

- X-Factor subflooring installation instructions
- ICC-ES ESR-1785
- Requirements of authorities having jurisdiction
- ICC-ES ESL-1561

Tongue and groove edges are self-spacing; panel ends should be spaced 1/8" (3mm) apart. Stagger end joints minimum one joist span in accordance with applicable code.

INSTALLATION METHODS

AdvanTech X-Factor can be installed over wood or cold-formed metal floor framing. Install over wood using nail or screw fasteners. For metal framing applications, reference our Tech Tip "*Installing AdvanTech® Subflooring and Sheathing over Metal Framing*". Subfloor adhesive is recommended for all applications.

Fasteners: Any code-approved subfloor fastener can be used to attach AdvanTech X-Factor subfloor panels. Fasteners should penetrate wood members a minimum of 1" (25.4mm). Install fasteners 3/8" (9.5mm) to 1/2" (12.7mm) from panel edges. Space fasteners 6" (152mm) on-center on supported panel ends and 12" (305mm) on-center at intermediate support location. X-Factor subflooring panels have a printed fastening guide for 16" (406mm), 19.2" (488mm) and 24" (610mm) on-center fastener locations on the panel surface.

Adhesives: Polyurethane or solvent-based subfloor adhesives conforming to APA AFG-01 or ASTM D3498. For projects requiring low-VOC adhesives, consult adhesive manufacturer for compliant products. Apply a single 3/8" (10mm) bead on floor framing, and double bead on framing members supporting ends of two panels.

FINISHED FLOORING APPLICATIONS

- *Conventional Residential Carpet and Pad* : May be installed directly over X-Factor subflooring
- *Commercial Carpet, VCT, Sheet Vinyl* : Minimum 1/4" (6mm) thick plywood underlayment per finished flooring manufacturer recommendations
- *Hardwood and Engineered Wood Flooring* : Tape X-Factor seams as an alternative to applying #15 felt , verify with finished flooring manufacturer for recommendations
- *Ceramic Tile and Porcelain*: Apply underlayment as required by ANSI A108 and install tile and underlayment in accordance with TCNA installation methods
- *Gypsum Concrete Underlayment*: May be applied directly over primed X-Factor subflooring or in combination with a sound attenuation membrane. Follow underlayment manufacturer's instructions

STORAGE AND HANDLING

Store and handle products according to manufacturer's published instructions. Support panel bundles off the ground. Cover stored panels with weatherproof protective material and allow sides of protective material to remain loose to ensure adequate air circulation. In high-moisture conditions, cut bundle banding to prevent edge damage to the panels.

AVAILABILITY

Huber Engineered Woods' AdvanTech X-Factor subfloor panels are manufactured at multiple locations in the U.S. and are available through distributors nationwide. Visit HuberWood.com/AdvanTechXFactor or contact Huber Engineered Woods for a retailer near you.

WARRANTY

AdvanTech X-Factor subfloor panels are guaranteed not to delaminate nor require sanding for 500 days after the date of purchase. See AdvanTech Residential Limited Lifetime Warranty or AdvanTech Commercial Limited Lifetime Warranty available at huberwood.com/warranties for full details.

NOTES AND LIMITATIONS

- When a building's uninterrupted flooring length or width exceeds 80', designers should incorporate expansion joints to accommodate the cumulative effect of incremental panel expansion. This is an industry recommendation and is not unique to X-Factor.
- Do not install water sealers on AdvanTech X-Factor subflooring, this may void the lifetime limited warranty.
- Do not directly paint with water-based coatings such as latex paints
- Do not use water sealers
- Do not use in permanent exterior applications
- Do not use salt-based ice melts

TECHNICAL SERVICE

Detailed information including specifications, installation guidance, code acceptance and product literature is available through Huber Engineered Woods. Please visit HuberWood.com/AdvanTechXFactor or call 1.800.933.9220 ext 2716 to speak to a technical representative.

AVAILABLE RESOURCES

HuberWood.com/AdvanTechXFactor