

Installing AdvanTech® Subflooring and Sheathing over Metal Framing

Light-gauge metal framing is used in many different aspects of today’s construction industry. Though it’s more prevalent in light commercial construction, it can also be used in Type V construction. The two primary types of fasteners used to attach wood structural panels to light-gauge framing are screws and pins. The following sections outline the proper installation methods for Huber Engineered Woods’ AdvanTech subflooring and AdvanTech sheathing panels over metal framing.

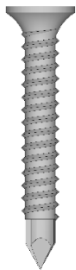
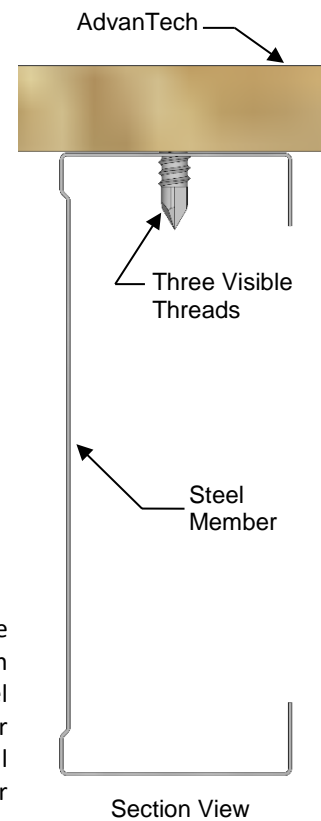
Self-Tapping Metal Screws

When installing AdvanTech® subflooring and sheathing over light-gauge metal framing, it is recommended to use self-tapping or self-drilling drill points. A bugle head or flat head screw is recommended to allow the head of the fastener to be installed flush or countersunk to the AdvanTech panels. We do not recommend using hex head screws to attach AdvanTech subflooring and sheathing over light-gauge framing since the head of these screws will not install flush with the AdvanTech panels, and this could interfere with finished floor and wall covering installation.

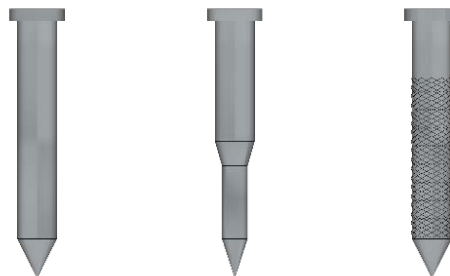
A minimum of 3 threads should be exposed through the light-gauge framing beneath the AdvanTech panels once the fasteners have been installed. Consult with the light-gauge metal manufacturer for recommendations on the size and point style of the screws to be used when attaching wood structural panels.

Pin Fasteners

Another type of fastener recommended for installing AdvanTech over light-gauge framing is steel pins. Steel pins contain specially designed grooves that spiral down the shaft called knurls. The knurls help to penetrate and grip the light-gauge steel framing. Steel pins are installed with pneumatic air guns similar to those used for typical framing nails. We recommend following the light-gauge metal manufacturers recommendations on the size, type, and length of steel pins for installing wood structural panels. For additional wood-to-steel fastener options, refer to the [2003 Hybrid Wood and Steel Details – Builder’s Guide](#).



Self-Tapping Metal Screw



Pneumatically Driven Pin Fasteners

AdvanTech Subflooring over Light-Gauge Metal Framing

To achieve optimum performance, we recommend applying a continuous bead of polyurethane or solvent based adhesive directly to the light-gauge metal joists prior to installing the AdvanTech flooring panels. The following steps outline the recommended installation of AdvanTech panels over light-gauge framing.

- Install panels with long dimension perpendicular to supports.
- Apply a continuous bead of polyurethane or solvent based adhesive to joists per manufacturer's written instructions.
- Use the recommended size fastener by the light-gauge framing manufacturer for attaching wood structural panels. If using screws, the fastener should penetrate till at least 3 threads are visible. Steel pins should be installed as to penetrate the framing a minimum ¼".
- Screws for attachment of structural sheathing panels shall be bugle head, flat head or similar head style.
- The method of attachment of exterior wall covering materials to metal stud wall framing shall conform to the manufacturer's installation instructions.
- Panels shall be fastened a maximum spacing of 6" o.c. along panel edges and 12" o.c. along intermediate joists.
- Provide 1/8" expansion gap at 4-foot ends. T&G joints are self-spacing.



AdvanTech Subflooring over Metal Framing

AdvanTech subfloor adhesive can be used with metal framing if there is no oily residue on the metal framing.



AdvanTech Subfloor Adhesive over Metal Framing

AdvanTech® Sheathing over Light-Gauge Metal Framing

The following steps outline the recommended installation of AdvanTech sheathing panels over light-gauge metal wall stud framing.

- Studs should be spaced a maximum 24" o.c.
- Minimum panel thickness is 7/16" for structural sheathing.
- Use the recommended size fastener by the light-gauge framing manufacturer for attaching wood structural panels. If using screws, the fastener should penetrate until at least 3 threads are visible. Steel pins should be installed as to penetrate the framing a minimum ¼".
- Screws for attachment of structural sheathing panels shall be bugle head, flat head or similar head style.
- The method of attachment of exterior wall covering materials to metal stud wall framing shall conform to the manufacturer's installation instructions.
- Panels shall be fastened a maximum spacing of 6" o.c. along all panel edges and 12" o.c. along intermediate studs.
- Provide 1/8" expansion gap at 4-foot ends.



AdvanTech Sheathing over Metal Framing

As an alternative to screws and pins, powder-actuated fasteners can be used to fasten AdvanTech subflooring and AdvanTech sheathing. Powder-actuated fasteners are specialty fasteners that provide the ability to fasten into concrete, masonry, and structural steel. Powder actuated fastening systems typically result in quicker installation. When considering using a proprietary fastening method, always request an Evaluation Service Report or an approved fastener design (*Hybrid Wood and Steel Details – Builders Guide, 28*).

Please visit www.advantechperforms.com or contact our technical services department at 800-933-9220 Ext 2716 with any questions or comments.