

Technical Tip

Overdriven Fasteners in ZIP System® Sheathing

Nails used to attach ZIP System sheathing to supporting framing members may occasionally penetrate beyond the face of the ZIP System panels. An ideal installation would be where fastener heads are flush with the panel surface. For this correspondence, “Overdriven Fasteners,” are defined as nails that are installed through the panel and into a framing member, like a wall stud or rafter, with the fastener head penetrating into the integrated moisture barrier.

For roof applications, ZIP System sheathing is code recognized in ICC-ES ESR-1473 as a combination roof sheathing and roof underlayment. When used on a wall, ZIP System sheathing is code-recognized in ICC-ES ESR-1474 as a combination wall sheathing, air barrier and water-resistive barrier. Both International and Residential Building codes have specific requirements on fastener types, size and spacing when attaching wood structural panels as roof or wall sheathing. Minimum required fastening and allowable shear values required by code are based on the assumption that fasteners are installed flush with the sheathing surface. Due to variations in materials and limitations on equipment, this may be difficult to achieve in some situations. According to the TECO Tech Tip, *Reduction in Shear Capacity Due to Overdriven Fasteners*, shear capacity could be reduced up to 25% depending on the depth and amount of fasteners that are overdriven. Please refer to technical bulletins published by APA and TECO at www.apawood.org and www.tecotested.com for more information about reduced shear capacity due to overdriven fasteners. Consult your local building official or design professional for any additional nailing that may be required due to overdriven fasteners.

ZIP System Sheathing has been tested against water penetration in both laboratory and field conditions using standard ASTM tests at specified pressures. Panels were tested with overdriven fasteners at various depths and then compared with panels that were tested with fastener heads flush. The panels with overdriven fasteners satisfied the same performance requirements as panels installed with fastener heads flush. Huber Engineered Woods does not require taping or sealing overdriven fasteners. ZIP System panels that are attached with overdriven fasteners will not void the ZIP System warranty.

Although overdriven fasteners do not affect ZIP System sheathing’s ability to resist moisture, it may reduce the shear capacity of the fastener. Overdriven fasteners can reduce the amount of wind or earthquake loading a shear wall is designed to resist. This possible reduction in shear capacity is inherent with all diaphragms and shear walls constructed with structural OSB or plywood and is NOT specific to ZIP System products.

Please contact Huber Engineered Woods at 800-933-9220 with any questions or comments.