

# Technical Bulletin #12b

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## NAIL WITHDRAWAL CAPACITIES IN OSB

With the use of Premier SIPS Structural Insulated Panels there are numerous instances where the attachment of finishing materials such as shingles, siding, drywall etc... is required. The application of these materials is typically accomplished through the use of conventional nail products. Data pertaining to the pullout resistance of nails in OSB is not readily available. To provide data on direct withdrawal resistance of nail fasteners placed into the face of Premier SIPS, an independent code recognized testing firm conducted withdrawal tests following standard ASTM D1037 procedures. The following is a summary of the average ultimate values achieved for various nail fasteners placed into 7/16" OSB.

AVERAGE DIRECT WITHDRAWAL (PULLOUT) – lbs.	
NAIL SIZE & DESCRIPTION	AVG. ULTIMATE PULLOUT
4d ring shank-drywall nail	133
6d smooth galvanized	59
Roofing Nail-smooth galvanized	51
8d smooth coated sinker	150
8d smooth galvanized spiral shank	112
8d galvanized ring shank	77
8d smooth galvanized	65
8d bright box	107
10d galvanized ring shank	164
16d smooth galvanized	63
16d bright box	90
These values are ultimate values. Appropriate safety factors should be applied to obtain design values.	

This data has been compiled to provide manufacturers, designers and engineers with values for assessment of fastener requirements.