

## Smooth Shank Nail Pullout Capacity

Architects, Engineers, and Building Contractors must often consider the pullout capacity of nails in PorterSIPS panels to determine the correct fastener placement required for finishing products and systems. The following table identifies various withdrawal design values (pullout capacities) for different types of smooth shanked nails.

Nail Type	Pennyweight	Diameter (in) <sup>1</sup>	Withdrawal Design Values (lb) <sup>2,3,4</sup>
Common	6d	0.113	6.9
	7d	0.113	6.9
	8d	0.131	8.0
	10d	0.148	9.0
	12d	0.148	9.0
	16d	0.162	9.9
Box	6d	0.099	6.0
	7d	0.099	6.0
	8d	0.113	6.9
	10d	0.128	7.8
	12d	0.128	7.8
	16d	0.135	8.2
Sinker	6d	0.092	5.6
	7d	0.099	6.0
	8d	0.113	6.9
	10d	0.12	7.3
	12d	0.135	8.2
	16d	0.148	9.0

- 1 Reference National Design Wood Specification (NDS) 2024, Appendix L (Table L4).
- 2 Reference National Design Wood Specification (NDS) 2024, Section 12.2.3.1 (Eq. 12.2-3).
- 3 These values incorporate the properties of the sheathing used on the top side of PorterSIPS. The sheathing thickness is 7/16" and the sheathing specific gravity is 0.40 for smooth shanked nails per the APA Panel Design Specification (PDS), 2020, Table 4.
- 4 The withdrawal design values shall be multiplied by all the applicable load adjustment factors in National Design Wood Specification (NDS) 2024, Section 11.3 (Table 11.3.1).

PorterSIPS - A Brand of PorterCorp  
Corporate Headquarters 4240 136th Ave., Holland, MI 49424

**Office:** 616.738.0995      **Fax:** 616.928.0076  
**Email:** info@portersips.com      **Web:** www.portersips.com