

Product Evaluation

EC22 | 0922

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: EC-22

Effective Date: September 1, 2022

Re-evaluation Date: September 2026

Product Name: LP® SmartSide® and LP Smartside® ExpertFinish Lap, Panel, and Vertical Siding

Manufacturer: Louisiana-Pacific Corporation
1610 West End Ave
Suite 200
Nashville, TN 37203
(888) 820-0325

General Description:

LP® SmartSide® lap, panel, and vertical siding are a zinc borate treated composite of oriented strand board (OSB) bonded to a 0.012" thick phenolic resin-saturated, primed paper overlay. The lap siding covered in this evaluation report is available in 3/8 and 7/16 Performance Categories. The lap siding covered in this evaluation report is available in 5", 6", 7", 8", 9.5", and 12" widths and comes in 16' lengths. The panel siding covered in this evaluation report is available in 3/8", 7/16", and 19/32" thicknesses. The panel siding has shiplapped edges. The panel siding is 4' wide and comes in 4' to 10' in length.

Limitations:

Lap Siding

- **Wall Framing:** Minimum Spruce-Pine-Fir or Southern Yellow Pine dimensional lumber (minimum specific gravity of 0.42).
- **Wall Stud Spacing:** Refer to Table 1a.

- **Fastener:** Common or box nails - minimum smooth shank diameter of 0.092", minimum 1-1/2" embedment into stud or wood structural panel and stud.
- **Design Pressure:** The allowable design pressure for siding is specified in Table 1a.

Table 1a
LP® SmartSide® Lap Siding
Allowable Design Pressure

Performance Category	Maximum Wall Stud Spacing	Siding Width (in.)	Allowable Design Pressure (psf)
3/8	16"	5	78
		6	63
		7	52
		8	45
		9.5	37
		12	28
7/16	16"	6	63
		7	52
		8	45
		9.5	37
		12	28
	24"	6	42
		7	35
		8	30
		9.5	25
		12	19

Lap Siding

- **Wall Framing:** Minimum Spruce-Pine-Fir or Southern Yellow Pine dimensional lumber (minimum specific gravity of 0.42).
- **Wall Stud Spacing:** Refer to Table 1b.
- **Fastener:** Common or box nails - minimum smooth shank diameter of 0.113", minimum 2" embedment into stud or wood structural panel and stud.
- **Design Pressure:** The allowable design pressure for siding is specified in Table 1b.

Table 1b
LP® SmartSide® Lap Siding
Allowable Design Pressure

Performance Category	Maximum Wall Stud Spacing	Siding Width (in.)	Allowable Design Pressure (psf)
3/8	16"	5	80
		6	80
		7	80
		8	74
		9.5	61
		12	47
7/16	16"	6	80
		7	80
		8	74
		9.5	65
		12	47
	24"	6	69
		7	58
		8	49
		9.5	41
		12	31

Panel Siding (3/8 Performance Category)

- **Shiplap Edge:** Use shear capacity for 5/16 Performance Category.
- **Wall Framing:** Douglas Fir-Larch or Southern Yellow Pine dimensional lumber (minimum specific gravity of 0.50).
- **Wall Stud Spacing:** Refer to Table 2.
- **Fastener:** Common or box - minimum smooth shank diameter of 0.092", minimum 1-1/2" embedment into studs or wood structural panel and stud.
- **Design Pressure:** The allowable design pressure for the panel siding is specified in Table 2.
- **Lateral Load Resistance:** The allowable lateral load for panel siding is specified in Table 2.

Panel Siding (7/16 or 19/32 Performance Category)

- **Shiplap Edge:** Use shear capacity for 3/8 Performance Category.
- **Wall Framing:** Douglas Fir-Larch or Southern Yellow Pine dimensional lumber (minimum specific gravity of 0.50).
- **Wall Stud Spacing:** Refer to Table 2.
- **Fastener:** Common or box - minimum smooth shank diameter of 0.113", minimum 2" embedment into stud or wood structural panel and stud.
- **Design Pressure:** The allowable design pressure for the panel siding is specified in Table 2.
- **Lateral Load Resistance:** The allowable lateral load for panel siding is specified in Table 2.

**Table 2
LP® SmartSide® Panel Siding
Allowable Design Pressure and Allowable Lateral load**

Performance Category	Fastener	Fastener Spacing for Studs Spaced 16" o.c.		Fastener Spacing for Studs Spaced 24" o.c.		Allowable Design Pressure 16"/24"	Allowable Lateral Load
		Perimeter	Field	Perimeter	Field		
5/16	0.092" dia	3" o.c.	6" o.c.	3" o.c.	6" o.c.	52/35 psf	350 plf
3/8	0.113" dia	3" o.c.	6" o.c.	3" o.c.	6" o.c.	80/58 psf	410 plf
7/16	0.113" dia	3" o.c.	6" o.c.	3" o.c.	6" o.c.	80/58 psf	410 plf
19/32	0.113" dia	3" o.c.	6" o.c.	3" o.c.	6" o.c.	80/58 psf	410 plf

Lap Siding-Direct to Sheathing Attachment

- **Wall Sheathing:** Siding must be installed over 7/16 Performance Category or thicker wood structural panel sheathing meeting DOC PS 1 or DOC PS 2 requirements.
- **Fastener:** Common or box nails - minimum smooth shank diameter of 0.092", long enough to full penetrate thru the wood structural panel.
- **Design Pressure:** The allowable design pressure for lap siding is specified in Table 3a.

Panel Siding-Direct to Sheathing Attachment

- **Wall Sheathing:** Siding must be installed over 7/16 Performance Category or thicker wood structural panel sheathing meeting DOC PS 1 or DOC PS 2 requirements.
- **Fastener:** Common or box nails - minimum smooth shank diameter of 0.113", long enough to full penetrate thru the wood structural panel.
- **Design Pressure:** The allowable design pressure for panel siding is specified in Table 3b.

Vertical Siding or Lap Siding Installed Vertically-Direct to Sheathing Attachment

- **Wall Sheathing:** Siding must be installed over 7/16 Performance Category or thicker wood structural panel sheathing meeting DOC PS 1 or DOC PS 2 requirements.
- **Fastener:** Common or box nails - minimum smooth shank diameter of 0.092", long enough to full penetrate thru the wood structural panel.
- **Design Pressure:** The allowable design pressure for vertical siding or lap siding installed vertically is specified in Table 4.

Table 3a
LP® SmartSide® Lap Siding
Allowable Design Pressure

Performance Category	Maximum Ring Shank Nail Spacing (in.)	Siding Width (in.)	Allowable Design Pressure (psf)
3/8	8	5	80
		6	80
		7	80
		8	80
		9.5	77
		12	60
3/8	12	5	80
		6	80
		7	73
		8	62
		9.5	51
		12	40

Table 3b
LP® SmartSide® Panel Siding
Allowable Design Pressure

Performance Category	Max. Ring Shank Nail Spacing (in.)		Allowable Design Pressure (psf)
	Vertical	Horizontal	
3/8	8	8	80
	10	10	52
	12	12	36
	16	16	20
7/16	8	8	80
	10	10	52
	12	12	36
	16	16	20
19/32	8	8	80
	10	10	52
	12	12	36
	16	16	20

**Table 4
 LP® SmartSide® Vertical Siding or Lap Siding Installed Vertically
 Allowable Design Pressure**

Performance Category	Siding Type	Width (in.)	Fastener Edge Spacing (in.)	Allowable Design Pressure (psf)
3/8	Vertical	16	6	80
	Lap Siding Installed Vertically	5	12	80
		6		72
		7		62
		8		54
		9.5		46
		12		36
		7/16		Lap Siding Installed Vertically
7	62			
8	54			
9.5	46			
12	36			

Installation:

LP® SmartSide® Lap Siding:

The lap siding must be installed in accordance with the manufacturer’s application instructions and this product evaluation report.

The lap siding must not be used as wall bracing.

The lap siding may be installed over sheathing or directly to the wall studs.

Lap siding must be blind nailed to each wall stud per the manufacturer’s application instructions using the fasteners specified in this evaluation report. One fastener per wall stud is required. The fasteners must be located 3/4" from the top edge of the siding.

Maximum wall stud spacing must be as specified in Table 1a and Table 1b.

Lap siding joints should be staggered over successive courses. For installation without nailable sheathing, joints must occur over wall framing.

Siding may be installed directly to stud (Table 1a and Table 1b) or sheathing only attachment (Table 3a and Table 4)

If a non-structural sheathing (foam or fiberboard) is used, then the length of the fasteners used to secure the siding to the studs must be increased by the thickness of the non-structural sheathing.

Fasteners must penetrate wall studs a minimum of 1-1/2" when using 0.092" diameter nails, and penetrate the wall studs a minimum of 2" when using 0.113" diameter nails.

LP® SmartSide® Panel Siding:

The panel siding must be installed in accordance with the manufacturer's application instructions and this product evaluation report.

The panel siding may be used as wall bracing.

Panel siding not used for lateral load resistance may be installed over nailable sheathing or directly to wall studs.

Panel siding used for lateral load resistance must be installed directly to wall studs or may be nailed directly over foam sheathing up to 1" thick without a reduction in the allowable racking shear capacity (wall bracing capacity).

The panel siding used for lateral load resistance must be installed with the long dimension in the vertical direction.

Maximum wall stud spacing must be as specified in this evaluation report.

Fasteners used for lateral load resistance must penetrate wall studs a minimum of 1-1/2" when using 0.092" diameter nails, and penetrate the wall studs a minimum of 2" when using 0.113" diameter nails.

Fastener spacing must be as specified in Table 2 when panels are used for lateral load resistance.

3/8 Performance Category panel siding requires a double row of fasteners along the vertical panel shiplap edges when used for lateral load resistance. Fastener location must be as specified in the manufacturer's application instructions.

Note: Keep the manufacturer's application instructions available on the job site during the application. Use corrosion resistant fasteners as specified in the IRC, the IBC, and the siding manufacturer's application instructions.