APA PRODUCT REPORT®

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LP® SmartSide® Strand Substrate Soffit and Rated Sheathing/Ceiling Deck Louisiana-Pacific Corporation

PR-N117

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Product: LP® SmartSide® Strand Substrate Soffit and Rated Sheathing/Ceiling Deck
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1. Basis of the product report:
   - 2015, 2012 and 2009 International Building Code: Section 104.11 Alternative materials
   - 2015, 2012 and 2009 International Residential Code: Section R104.11 Alternative materials
   - DOC PS 2-10 Performance Standard for Wood-Based Structural-Use Panels
   - APA PRP-108 Performance Standards and Qualification Policy for Structural-Use Panels
   - ANSI/AWC SDPWS-2015 - Special Design Provisions for Wind and Seismic
   - ASCE 7-10 and ASCE 7-05 Minimum Design Loads for Buildings and Other Structures
   - APA Reports T92Q-17, T92Q-22, T94Q-17, T2000Q-21, T2007P-37, T2015Q-40, and T2015Q-41, and other qualification data

2. Product description:
   Louisiana-Pacific Corporation SmartSide® Strand Substrate Soffit and Rated Sheathing/Ceiling Deck panels are made with strands of various wood species and strand classifications in accordance with the in-plant manufacturing standard approved by APA, overlaid with a resin treated paper, and available with either a smooth or embossed surface texture. SmartSide Strand Substrate Soffit and Rated Sheathing/Ceiling Deck panels are available in 3/8, 7/16 and 19/32 Performance Categories. They are available as 4x8-foot or 4x9-foot panels or cut to 12-, 16- or 24-inch widths in lengths up to 16 feet. The panels are treated with Zinc Borate for decay and insect resistance. The efficacy of the preservative treatment is outside the scope of this report and the APA certification program. The soffit panels are intended for use as closed soffits at a 24 o.c. Span Rating with the panel strength axis perpendicular to supports. The Rated Sheathing/Ceiling Deck panels are intended for use as open soffits at a 24/0 or 24/16 Span Rating with the panel strength axis perpendicular to supports.

   Vented soffit products are available in a 3/8 Performance Category, widths of 8, 12, 16 or 24 inches and lengths up to 16 feet. Refer to the manufacturer's literature for details on the configuration of the vented soffits products.

3. Design properties:
   Design wind loads for non-vented LP SmartSide Strand Substrate Soffit products are listed in Tables 1 and 2 based on the design procedures in ASCE 7-05 and ASCE 7-10, respectively.

4. Product installation:
   LP SmartSide Strand Substrate Soffit and Rated Sheathing/Ceiling Deck shall be installed in accordance with the recommendations provided by the manufacturer (www.lpcorp.com/products/siding/lp-smartside-trim-siding/) and APA *Engineered Wood Construction Guide*, Form E30 (www.apawood.org/resource-library). The maximum span shall be in accordance with the Span Rating shown in the trademark for the intended application.

5. Fire-resistant construction:
   Wood structural panels that are not fire-retardant-treated have been shown to meet a Class III (or C) category for flame spread. Unless otherwise specified, fire-resistant construction shall be in accordance with the recommendations provided in APA *Fire-Rated Systems*, Form W305 (see link above). Vented soffit products shall not be used in fire-resistant construction.

6. Limitations:
   a) LP SmartSide Strand Substrate Soffit panels shall be used only as closed soffits at a 24 o.c. Span Rating with the panel strength axis perpendicular to supports.
   b) LP SmartSide Strand Substrate Rated Sheathing/Ceiling Deck panels shall be used only for open soffits or sheathing at a 24/0 or 24/16 Span Rating (refer to trademark) with the panel strength axis perpendicular to supports.
   c) LP SmartSide Strand Substrate Soffit used outdoors must be finished in accordance with recommendations provided by the manufacturer and APA *Engineered Wood Construction Guide*, Form E30 (see links above).
   d) LP SmartSide Strand Substrate Soffit and Rated Sheathing/Ceiling Deck panels are produced at Louisiana-Pacific Corporation facilities in Hayward, WI, Newberry, MI, Tomahawk, WI, Two Harbors, MN, and Swan Valley, Minitonas, MB under a quality assurance program audited by APA. The efficacy of the preservative treatment is outside the scope of this report and the APA certification program
   e) This report is subject to re-examination in one year.

7. Identification:
   LP SmartSide Strand Substrate Soffit and Rated Sheathing/Ceiling Deck panels described in this report are identified by a label bearing the manufacturer's name (Louisiana-Pacific Corporation) and/or trademark, the APA assigned plant number (357 for the Hayward plant, 416 for the Newberry plant, 435 for the Tomahawk plant, 399 for the Two Harbors plant, or 457 for the Swan Valley plant), the product Performance Category, the Span Rating, the Exposure Rating, the APA logo, the report number PR-N117, and a means of identifying the date of manufacture.

Table 1. **Maximum nominal (allowable) design wind speed, V_{asd},** (mph – 3-second gust) permitted for non-vented LP® SmartSide Strand Substrate Soffit[a]

Minimum Nail Size	Performance Category	Support Spacing[b] (in.)	Panel Nail Spacing		Maximum Allowable Wind Pressure (psf)	Maximum Nominal (Allowable) Wind Speed, V_{asd}[c] (mph)		
			Edges (in. o.c.)	Field (in. o.c.)		Wind Exposure Category		
						B	C	D
6d nonstaining corrosion-resistant box (0.099" x 2.0"). Min. nail head diameter = 0.266"	3/8	16	6	12	31	110	90	85
				6	62	150	130	120
		24	6	12	21	90	NP	NP
				6	42	130	110	100
8d nonstaining corrosion-resistant box (0.113" x 2.5") Min. nail head diameter = 0.297"		16	6	12	46	130	110	105
				6	92	170	150	150
		24	6	12	31	110	90	85
				6	61	150	130	120
8d nonstaining corrosion-resistant box (0.113" x 2.5") Min. nail head diameter = 0.297"	7/16	16	6	12	45	130	110	105
				6	89	170	150	145
		24	6	12	30	110	90	85
				6	59	150	130	120
8d nonstaining corrosion-resistant box (0.113" x 2.5") Min. nail head diameter = 0.297"	19/32	16	6	12	41	130	110	100
				6	82	170	150	140
		24	6	12	27	105	90	NP
				6	55	150	125	110
10d nonstaining corrosion-resistant box (0.128" x 3.0") Min. nail head diameter = 0.312"		16	6	12	58	150	130	120
				6	116	170	170	150
		24	6	12	39	125	105	90
				6	77	170	150	130

For **SI**: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 0.447 m/s.

[a] Panels shall be applied with strength axis across supports.
[b] Supporting framing must have a minimum specific gravity of 0.42.
[c] Table is based on wind pressures acting toward and away from building surfaces, at 30-ft height in Zone 5 with smallest effective area per Chapter 6 of ASCE 7-05, Section R301.2.1 of the 2009 and 2012 IRC, and Section 1609.1.1 of the 2009 IBC.

Table 2. **Maximum ultimate design wind speed, V_{ult},** (mph – 3-second gust) permitted for non-vented LP® SmartSide Strand Substrate Soffit[a]

Minimum Nail Size	Performance Category	Support Spacing[b] (in.)	Panel Nail Spacing		Maximum Ultimate Wind Pressure (psf)	Maximum Ultimate Design Wind Speed, V_{ult}[c] (mph)		
			Edges (in. o.c.)	Field (in. o.c.)		Wind Exposure Category		
						B	C	D
6d nonstaining corrosion-resistant box (0.099" x 2.0") Min. nail head diameter = 0.266"	3/8	16	6	12	52	140	120	110
				6	104	200[d]	160	160
		24	6	12	35	115	NP	NP
				6	69	160	140	130
8d nonstaining corrosion-resistant box (0.113" x 2.5") Min. nail head diameter = 0.297"		16	6	12	77	160	150	130
				6	153	200[d]	200[d]	180
		24	6	12	51	140	120	110
				6	102	200[d]	160	150
8d nonstaining corrosion-resistant box (0.113" x 2.5") Min. nail head diameter = 0.297"	7/16	16	6	12	74	160	140	130
				6	149	200[d]	200[d]	180
		24	6	12	50	140	120	110
				6	99	200[d]	160	150
8d nonstaining corrosion-resistant box (0.113" x 2.5") Min. nail head diameter = 0.297	19/32	16	6	12	69	160	140	130
				6	137	200[d]	200[d]	180
		24	6	12	46	130	115	NP
				6	92	180	160	150
10d nonstaining corrosion-resistant box (0.128" x 3.0") Min. nail head diameter = 0.312"		16	6	12	96	180	160	150
				6	193	200[d]	200[d]	200[d]
		24	6	12	64	160	130	120
				6	128	200[d]	180	160

For **SI**: 1 inch = 25.4 mm, 1 psf = 47.88 Pa, 1 mph = 0.447 m/s.

[a] Panels shall be applied with strength axis across supports.
[b] Supporting framing must have a minimum specific gravity of 0.42.
[c] Table is based on wind pressures acting toward and away from building surfaces, at 30-ft height in Zone 5 with smallest effective area per Chapter 26 of ASCE 7-10, Section R301.2.1 of the 2015 IRC, and Section 1609.1.1 of the 2012 and 2015 IBC.
[d] Table R301.2(2) of the 2015 IRC is limited to a maximum ultimate design wind speed, V_{ult}, of 180 mph.

APA – The Engineered Wood Association is an approved national standards developer accredited by American National Standards Institute (ANSI). APA publishes ANSI standards and Voluntary Product Standards for wood structural panels and engineered wood products. APA is an accredited certification body under ISO/IEC 17065 by Standards Council of Canada (SCC), an accredited inspection agency under ISO/IEC 17020 by International Code Council (ICC) International Accreditation Service (IAS), and an accredited testing organization under ISO/IEC 17025 by IAS. APA is also an approved Product Certification Agency, Testing Laboratory, Quality Assurance Entity, and Validation Entity by the State of Florida, and an approved testing laboratory by City of Los Angeles.

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