



# HardieNail™ Studless Siding Fastener

All national, state, and local building code requirements must be followed and where they are more stringent than the James Hardie installation requirements, state and local requirements will take precedence.

## Document Scope

This document applies to HardiePlank® Lap Siding, CemPlank® lap siding, Prevail® lap siding, HardiePanel® Vertical Siding, CemPanel® Siding, Prevail® Panel and HardieShingle® Panel Siding installed with HardieNail Fastener. The use of the HardieNail fastener with these products is limited to buildings not exceeding 85 feet in height.

## Siding General Description

James Hardie Siding Products are noncombustible fiber-cement siding, manufactured by James Hardie Building Products Inc.

## Siding Product Dimensions

Lap Siding – Thickness – 5/16 inch    Length – 12 feet    Width – Available in 5 1/4, 6 1/4, 7 1/4, 7 1/2, 8 1/4, or 9 1/4 inches  
Panel Siding – Thickness – 5/16 inch    Length – 8 feet    Width – 4 feet  
Shingle Panel Siding – Thickness – 1/4 inch    Length – 48 inches    Width – 15 1/4 inches

## Siding Product Composition

James Hardie siding products are a Grade II, Type A, fiber-cement flat sheet as defined by ASTM C 1186. The siding is manufactured by the Hatschek process and cured by high pressure steam autoclaving.

## Siding Code Compliance

James Hardie Siding Products comply with:

- The 2006, 2009, 2012, and 2015 International Building Code® (IBC) Section 1404.10 and 2006, 2009, 2012, and 2015 International Residential Code® (IRC) Table R703.4 and Section R703.10.1 as ASTM C 1186 Grade II, Type A (ISO 8336, Category A, Class 2) Fiber Cement.

## Wind Design:

- Design Tables 2, 3 and 4 as shown in this report provide the allowable capacity in mph for transverse load conditions for HardiePlank lap siding, HardiePanel vertical Siding and HardieShingle Panel Siding respectively attached to 7/16 inch Wood Structural Panel over either wood or metal framing (tested to ASTM E 330).

## Fire Characteristics:

- James Hardie Siding Products are classified as noncombustible when tested in accordance with ASTM E136.
- James Hardie Siding Products may be used in ASTM E 19 fire resistance rated assemblies as listed by Warnock Hersey 60 minute design JH/FCS 60-01, JH/FCS 60-02, JH/FCS 60-03, and JH/FCS 60-04.
- James Hardie Siding Products are Class A material according to 2006, 2009, 2012, and 2015 IBC Section 803.1.1. Surface burning characteristics in accordance with ASTM E 84: Flame Spread Index = 0 and Smoke Developed Index ≤ 5.
- The building official reserves the right to approve alternate materials, design and methods of construction based on research reports and/or tests based on 2006, 2009, 2012, and 2015 IBC Section 104.11, 2006, 2009, 2012, and 2015 IRC Section R104.11.
- Test reports can be furnished to the building official upon request, contact your local James Hardie sales representative.
- For more information, contact James Hardie at 1-888 J-HARDIE (1-888 542-7343) or [info@JamesHardie.com](mailto:info@JamesHardie.com).

## Siding Installation Requirements

- James Hardie Siding Products shall be installed on exterior walls braced in accordance with the applicable building code.
- A water-resistive barrier complying with Section 1403.2 of the IBC or Section R703.2 of the IRC is required to be installed.
- Install siding in accordance with this report and the James Hardie's published installation requirements. For a copy contact your local James Hardie sales representative or visit [www.JamesHardiePros.com](http://www.JamesHardiePros.com).

## HardieNail Description

HardieNail Studless Siding Fastener is manufactured by Paslode featuring patented tetraGRIP™ fastening technology. The HardieNail Studless Siding Fastener is manufactured from Grade 304 stainless steel with nominal dimension of 0.117 inch shank diameter by 1.125 inches long by 0.300 inch head diameter. The nails comply with the material requirements, physical properties, dimensional tolerance, workmanship requirements of ASTM F1667.

**Table 1, James Hardie Siding Products ASTM C 1186 Physical Properties and Supplementary Requirements**

Warnock Hersey  
AUTHORIZATION TO  
MARK



**Intertek**  
LISTED

Client # 8518,  
17832



	ASTM Test Method	General Property	Unit or Characteristic	Requirement	Result
Physical Attributes	ASTM C1185	Dimensional Tolerances	Length	± 0.5% or ±1/4 in	Pass
			Width	± 0.5% or ±1/4 in	
			Thickness	± 0.04 in	
			Squareness	<1/32 in/ft of length	
			Edge Straightness	<1/32 in/ft of length	
ASTM C1185	Density, lb/ft³		As reported	<75	
ASTM C1185	Water Tightness	Physical Observations	No drop formation		Pass
Durability	ASTM C1185	Flexural Strength	Wet conditioned, psi	>1015 psi	Pass
			Equilibrium conditioned, psi	>1450 psi	
	ASTM C1185	Warm Water Resistance, Observations	Physical Observations	No visible cracks or structural alteration	Pass
			Heat/Rain Resistance	Physical Observations	No visible cracks or structural alteration
ASTM C1185	Freeze/Thaw Resistance	Physical Observations	No visible cracks or structural alteration	Pass	
		Mass Loss, %	≤ 3.0%		
			Freeze/Thaw, % strength retention	≥ 80%	
Fire Characteristics	ASTM G23	UV Accelerated Weathering Test	Physical Observations	No cracking, checking, or crazing	Pass
	ASTM E84	Surface Burning Characteristics	Flame Spread Index (FSI)	0	
			Smoke Developed Index (SDI)	≤ 5	
			Fuel Contributed	0	
			NFPA Class	A	
			Uniform Building Code Class	As reported	1
			International Building Code® class		A
ASTM E136	Noncombustibility	Noncombustible			Pass



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**Table 2. Wind Design Table for HardiePlank lap siding**

**Table 2. Allowable Wind Speed (mph) for HardiePlank Lap Siding (Analytical Method in ASCE 7-10 Chapter 30 C&C Part 1 and Part 3)**

Product	Thickness (in.)	Width (in.)	Frame Type	Fastener	Fastening Method	Fastener Spacing (in.)	Allowable Design Load (psf)	Building Height <sup>2,5</sup> (ft.)	2012 & 2015 IBC, 2015 IRC (Ultimate Design Wind Speed, $V_{ult}$ ) <sup>4,5</sup>			2012 IRC, 2009 IBC & IRC (Basic Wind Speed, $V_{asd}$ ) <sup>4,5,6</sup>		
									Wind exposure category			Wind exposure category		
									B	C	D	B	C	D
HardiePlank Lap Siding	5/16	9.25	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing	12	39.5	0-15	165	150	136	128	116	106
								20	165	146	133	128	113	103
								25	165	143	131	128	111	101
								30	165	140	128	128	108	100
								35	162	138	127	125	107	98
								40	159	136	125	123	105	97
								45	156	134	124	121	104	96
								50	154	133	123	119	103	95
								55	152	131	122	118	102	94
								60	150	130	121	116	101	94
								65	133	115	107	103	89	83
								70	131	114	107	101	89	83
								75	130	113	106	100	88	82
								80	128	112	105	99	87	82
85	127	112	105	98	87	81								
HardiePlank Lap Siding	5/16	9.25	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing	16	31.2	0-15	147	133	121	114	103	94
								20	147	130	118	114	100	92
								25	147	127	116	114	98	90
								30	147	124	114	114	96	88
								35	144	122	113	111	95	87
								40	141	121	111	109	93	86
								45	139	119	110	108	92	85
								50	137	118	109	106	91	85
								55	135	117	108	105	90	84
								60	133	116	107	103	90	83
								65	118	102	-	91	79	-
								70	116	102	-	90	79	-
								75	115	101	-	89	78	-
								80	114	-	-	88	-	-
85	113	-	-	88	-	-								
HardiePlank Lap Siding	5/16	9.25	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing	20	26.2	0-15	135	122	111	104	95	86
								20	135	119	108	104	92	84
								25	135	116	106	104	90	82
								30	135	114	105	104	88	81
								35	132	112	103	102	87	80
								40	129	111	102	100	86	79
								45	127	109	101	99	85	78
								50	125	108	100	97	84	77
								55	124	107	99	96	83	77
								60	122	106	98	95	82	76
								65	108	-	-	84	-	-
								70	107	-	-	83	-	-
								75	106	-	-	82	-	-
								80	104	-	-	81	-	-
85	104	-	-	80	-	-								



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Product	Thickness (in.)	Width (in.)	Frame Type	Fastener	Fastening Method	Fastener Spacing (in.)	Allowable Design Load (psf)	Building Height <sup>2,5</sup> (ft.)	2012 & 2015 IBC, 2015 IRC (Ultimate Design Wind Speed, $V_{ult}$ ) <sup>4,5</sup>			2012 IRC, 2009 IBC & IRC (Basic Wind Speed, $V_{asd}$ ) <sup>4,5,6</sup>		
									Wind exposure category			Wind exposure category		
									B	C	D	B	C	D
HardiePlank Lap Siding	5/16	9.25	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing	24	22.9	0-15	126	114	104	98	89	80
								20	126	111	101	98	86	79
								25	126	109	100	98	84	77
								30	126	106	98	98	82	76
								35	123	105	97	96	81	75
								40	121	103	95	94	80	74
								45	119	102	94	92	79	73
								50	117	101	93	91	78	72
								55	116	100	93	90	77	72
								60	114	99	92	89	77	71
								65	101	-	-	78	-	-
								70	-	-	-	-	-	-
								75	-	-	-	-	-	-
80	-	-	-	-	-	-								
85	-	-	-	-	-	-								
HardiePlank Lap Siding	5/16	8.25	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing	12	42.7	0-15	172	156	142	133	121	110
								20	172	152	138	133	117	107
								25	172	148	136	133	115	105
								30	172	145	134	133	113	103
								35	168	143	132	130	111	102
								40	165	141	130	128	109	101
								45	162	139	129	126	108	100
								50	160	138	128	124	107	99
								55	158	137	127	122	106	98
								60	156	135	126	121	105	97
								65	138	120	111	107	93	86
								70	136	119	111	106	92	86
								75	135	118	110	104	91	85
80	133	117	109	103	91	85								
85	132	116	109	102	90	84								
HardiePlank Lap Siding	5/16	8.25	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing	16	34.1	0-15	154	139	127	119	108	98
								20	154	136	124	119	105	96
								25	154	133	121	119	103	94
								30	154	130	119	119	101	92
								35	150	128	118	117	99	91
								40	147	126	116	114	98	90
								45	145	125	115	112	97	89
								50	143	123	114	111	95	88
								55	141	122	113	109	95	88
								60	139	121	112	108	94	87
								65	123	107	-	95	83	-
								70	122	106	-	94	82	-
								75	120	105	-	93	82	-
80	119	104	-	92	81	-								
85	118	104	-	92	80	-								



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Product	Thickness (in.)	Width (in.)	Frame Type	Fastener	Fastening Method	Fastener Spacing (in.)	Allowable Design Load (psf)	Building Height <sup>2,5</sup> (ft.)	2012 & 2015 IBC, 2015 IRC (Ultimate Design Wind Speed, $V_{ult}$ ) <sup>4,5</sup>			2012 IRC, 2009 IBC & IRC (Basic Wind Speed, $V_{asd}$ ) <sup>4,5,6</sup>		
									Wind exposure category			Wind exposure category		
									B	C	D	B	C	D
HardiePlank Lap Siding	5/16	8.25	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing	20	28.9	0-15	141	128	117	110	99	90
								20	141	125	114	110	97	88
								25	141	122	112	110	95	87
								30	141	120	110	110	93	85
								35	139	118	109	107	91	84
								40	136	116	107	105	90	83
								45	134	115	106	103	89	82
								50	132	113	105	102	88	81
								55	130	112	104	101	87	81
								60	128	111	103	99	86	80
								65	113	-	-	88	-	-
								70	112	-	-	87	-	-
								75	111	-	-	86	-	-
80	110	-	-	85	-	-								
85	109	-	-	84	-	-								
HardiePlank Lap Siding	5/16	8.25	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing	24	25.4	0-15	133	120	109	103	93	85
								20	133	117	107	103	91	83
								25	133	114	105	103	89	81
								30	133	112	103	103	87	80
								35	130	110	102	101	86	79
								40	127	109	100	99	84	78
								45	125	108	99	97	83	77
								50	123	106	98	96	82	76
								55	122	105	98	94	82	76
								60	120	104	97	93	81	75
								65	106	-	-	82	-	-
								70	105	-	-	81	-	-
								75	104	-	-	80	-	-
80	103	-	-	80	-	-								
85	102	-	-	79	-	-								
HardiePlank Lap Siding	5/16	7.50	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing	12	45.8	0-15	178	162	147	138	125	114
								20	178	157	143	138	122	111
								25	178	154	141	138	119	109
								30	178	151	138	138	117	107
								35	174	148	137	135	115	106
								40	171	146	135	132	113	104
								45	168	144	134	130	112	103
								50	166	143	132	128	111	102
								55	164	141	131	127	110	102
								60	162	140	130	125	109	101
								65	143	124	115	111	96	89
								70	141	123	115	109	95	89
								75	140	122	114	108	95	88
80	138	121	113	107	94	88								
85	137	120	113	106	93	87								



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**Table 2, Wind Design Table for HardiePlank lap siding**

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Product	Thickness (in.)	Width (in.)	Frame Type	Fastener	Fastening Method	Fastener Spacing (in.)	Allowable Design Load (psf)	Building Height <sup>2,5</sup> (ft.)	2012 & 2015 IBC, 2015 IRC (Ultimate Design Wind Speed, $V_{ult}$ ) <sup>4,5</sup>			2012 IRC, 2009 IBC & IRC (Basic Wind Speed, $V_{asd}$ ) <sup>4,5,6</sup>		
									Wind exposure category			Wind exposure category		
									B	C	D	B	C	D
HardiePlank Lap Siding	5/16	7.50	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing	16	36.8	0-15	160	145	132	124	112	102
								20	160	141	129	124	109	100
								25	160	138	126	124	107	98
								30	160	135	124	124	105	96
								35	156	133	122	121	103	95
								40	153	131	121	119	101	94
								45	151	129	120	117	100	93
								50	148	128	119	115	99	92
								55	147	127	118	114	98	91
								60	145	126	117	112	97	90
								65	128	111	103	99	86	80
								70	126	110	103	98	85	80
								75	125	109	102	97	85	79
80	124	108	102	96	84	79								
85	123	108	101	95	84	78								
HardiePlank Lap Siding	5/16	7.50	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing	20	31.4	0-15	147	134	122	114	104	94
								20	147	130	119	114	101	92
								25	147	127	117	114	99	90
								30	147	125	115	114	97	89
								35	144	123	113	112	95	88
								40	142	121	112	110	94	87
								45	139	120	111	108	93	86
								50	137	118	109	106	92	85
								55	135	117	109	105	91	84
								60	134	116	108	104	90	83
								65	118	103	-	92	80	-
								70	117	102	-	90	79	-
								75	116	101	-	89	78	-
80	114	100	-	89	78	-								
85	113	-	-	88	-	-								
HardiePlank Lap Siding	5/16	7.50	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing	24	27.9	0-15	139	126	115	108	98	89
								20	139	123	112	108	95	87
								25	139	120	110	108	93	85
								30	139	117	108	108	91	84
								35	136	116	107	105	90	83
								40	133	114	105	103	88	82
								45	131	113	104	102	87	81
								50	129	111	103	100	86	80
								55	128	110	102	99	86	79
								60	126	109	102	98	85	79
								65	111	-	-	86	-	-
								70	110	-	-	85	-	-
								75	109	-	-	84	-	-
80	108	-	-	83	-	-								
85	107	-	-	83	-	-								



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Product	Thickness (in.)	Width (in.)	Frame Type	Fastener	Fastening Method	Fastener Spacing (in.)	Allowable Design Load (psf)	Building Height <sup>2,5</sup> (ft.)	2012 & 2015 IBC, 2015 IRC (Ultimate Design Wind Speed, $V_{ult}$ ) <sup>4,5</sup>			2012 IRC, 2009 IBC & IRC (Basic Wind Speed, $V_{asd}$ ) <sup>4,5,6</sup>		
									Wind exposure category			Wind exposure category		
									B	C	D	B	C	D
HardiePlank Lap Siding	5/16	7.25	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing	12	47.0	0-15	180	164	149	140	127	115
								20	180	159	145	140	123	113
								25	180	156	143	140	121	110
								30	180	152	140	140	118	109
								35	177	150	138	137	116	107
								40	173	148	137	134	115	106
								45	170	146	135	132	113	105
								50	168	145	134	130	112	104
								55	166	143	133	128	111	103
								60	164	142	132	127	110	102
								65	145	126	117	112	97	91
								70	143	125	116	111	97	90
								75	141	124	116	109	96	90
80	140	123	115	108	95	89								
85	139	122	114	107	94	89								
HardiePlank Lap Siding	5/16	7.25	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing	16	37.9	0-15	162	147	134	125	114	103
								20	162	143	130	125	111	101
								25	162	140	128	125	108	99
								30	162	137	126	125	106	97
								35	159	135	124	123	104	96
								40	155	133	123	120	103	95
								45	153	131	121	119	102	94
								50	151	130	120	117	101	93
								55	149	129	119	115	100	92
								60	147	128	118	114	99	92
								65	130	113	105	101	87	81
								70	128	112	105	99	87	81
								75	127	111	104	98	86	80
80	126	110	103	97	85	80								
85	125	109	103	96	85	80								
HardiePlank Lap Siding	5/16	7.25	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing	20	32.4	0-15	150	136	123	116	105	96
								20	150	132	121	116	102	93
								25	150	129	118	116	100	92
								30	150	127	116	116	98	90
								35	147	125	115	114	97	89
								40	144	123	113	111	95	88
								45	141	121	112	110	94	87
								50	139	120	111	108	93	86
								55	138	119	110	107	92	85
								60	136	118	109	105	91	85
								65	120	104	-	93	81	-
								70	119	104	-	92	80	-
								75	117	103	-	91	79	-
80	116	102	-	90	79	-								
85	115	101	-	89	78	-								



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All national, state, and local building code requirements must be followed and where they are more stringent than the James Hardie installation requirements, state and local requirements will take precedence.

**Table 2, Wind Design Table for HardiePlank lap siding**

**Table 2. Allowable Wind Speed (mph) for HardiePlank Lap Siding (Analytical Method in ASCE 7-10 Chapter 30 C&C Part 1 and Part 3)**

Product	Thickness (in.)	Width (in.)	Frame Type	Fastener	Fastening Method	Fastener Spacing (in.)	Allowable Design Load (psf)	Building Height <sup>2,5</sup> (ft.)	2012 & 2015 IBC, 2015 IRC (Ultimate Design Wind Speed, $V_{ult}$ ) <sup>4,5</sup>			2012 IRC, 2009 IBC & IRC (Basic Wind Speed, $V_{asd}$ ) <sup>4,5,6</sup>		
									Wind exposure category			Wind exposure category		
									B	C	D	B	C	D
HardiePlank Lap Siding	5/16	7.25	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing	24	28.8	0-15	141	128	116	109	99	90
								20	141	125	114	109	96	88
								25	141	122	112	109	94	86
								30	141	119	110	109	92	85
								35	138	118	108	107	91	84
								40	136	116	107	105	90	83
								45	133	114	106	103	89	82
								50	131	113	105	102	88	81
								55	130	112	104	100	87	81
								60	128	111	103	99	86	80
								65	113	-	-	88	-	-
								70	112	-	-	87	-	-
								75	111	-	-	86	-	-
80	109	-	-	85	-	-								
85	109	-	-	84	-	-								
HardiePlank Lap Siding	5/16	6.25	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing	12	53.0	0-15	192	174	158	148	135	122
								20	192	169	154	148	131	119
								25	192	165	151	148	128	117
								30	192	162	149	148	125	115
								35	188	159	147	145	124	114
								40	184	157	145	142	122	112
								45	181	155	144	140	120	111
								50	178	154	142	138	119	110
								55	176	152	141	136	118	109
								60	174	151	140	135	117	108
								65	154	134	124	119	103	96
								70	152	132	124	118	103	96
								75	150	131	123	116	102	95
80	148	130	122	115	101	94								
85	147	129	121	114	100	94								
HardiePlank Lap Siding	5/16	6.25	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing	16	43.3	0-15	173	157	143	134	122	111
								20	173	153	139	134	118	108
								25	173	149	137	134	116	106
								30	173	146	135	134	113	104
								35	170	144	133	131	112	103
								40	166	142	131	129	110	102
								45	164	140	130	127	109	101
								50	161	139	129	125	107	100
								55	159	138	128	123	107	99
								60	157	136	127	122	106	98
								65	139	121	112	107	93	87
								70	137	120	112	106	93	87
								75	136	119	111	105	92	86
80	134	118	110	104	91	85								
85	133	117	110	103	91	85								



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# HardieNail™ Studless Siding Fastener

All national, state, and local building code requirements must be followed and where they are more stringent than the James Hardie installation requirements, state and local requirements will take precedence.

**Table 2, Wind Design Table for HardiePlank lap siding**

**Table 2. Allowable Wind Speed (mph) for HardiePlank Lap Siding (Analytical Method in ASCE 7-10 Chapter 30 C&C Part 1 and Part 3)**

Product	Thickness (in.)	Width (in.)	Frame Type	Fastener	Fastening Method	Fastener Spacing (in.)	Allowable Design Load (psf)	Building Height <sup>2,5</sup> (ft.)	2012 & 2015 IBC, 2015 IRC (Ultimate Design Wind Speed, $V_{ult}$ ) <sup>4,5</sup>			2012 IRC, 2009 IBC & IRC (Basic Wind Speed, $V_{asd}$ ) <sup>4,5,6</sup>		
									Wind exposure category			Wind exposure category		
									B	C	D	B	C	D
HardiePlank Lap Siding	5/16	6.25	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing	20	37.4	0-15	161	146	133	125	113	103
								20	161	142	130	125	110	100
								25	161	139	127	125	108	99
								30	161	136	125	125	105	97
								35	158	134	123	122	104	96
								40	154	132	122	120	102	94
								45	152	130	121	118	101	93
								50	150	129	119	116	100	93
								55	148	128	119	114	99	92
								60	146	127	118	113	98	91
								65	129	112	104	100	87	81
								70	127	111	104	99	86	80
								75	126	110	103	98	85	80
80	125	109	102	97	85	79								
85	124	109	102	96	84	79								
HardiePlank Lap Siding	5/16	6.25	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing	24	33.5	0-15	152	138	126	118	107	97
								20	152	134	123	118	104	95
								25	152	131	120	118	102	93
								30	152	129	118	118	100	92
								35	149	127	117	116	98	90
								40	146	125	115	113	97	89
								45	144	123	114	111	96	88
								50	142	122	113	110	95	88
								55	140	121	112	108	94	87
								60	138	120	111	107	93	86
								65	122	106	-	95	82	-
								70	121	105	-	93	82	-
								75	119	104	-	92	81	-
80	118	103	-	91	80	-								
85	117	103	-	91	80	-								
HardiePlank Lap Siding	5/16	5.25	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing	12	62.1	0-15	207	188	171	161	146	132
								20	207	183	167	161	142	129
								25	207	179	164	161	139	127
								30	207	175	161	161	136	125
								35	203	173	159	157	134	123
								40	199	170	157	154	132	122
								45	196	168	155	152	130	120
								50	193	166	154	149	129	119
								55	190	165	153	148	128	118
								60	188	163	152	146	126	117
								65	166	145	134	129	112	104
								70	164	143	134	127	111	104
								75	162	142	133	126	110	103
80	161	141	132	124	109	102								
85	159	140	131	124	108	102								





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# HardieNail™ Studless Siding Fastener

All national, state, and local building code requirements must be followed and where they are more stringent than the James Hardie installation requirements, state and local requirements will take precedence.

**Table 2, Wind Design Table for HardiePlank lap siding**

**Table 2. Allowable Wind Speed (mph) for HardiePlank Lap Siding (Analytical Method in ASCE 7-10 Chapter 30 C&C Part 1 and Part 3)**

Product	Thickness (in.)	Width (in.)	Frame Type	Fastener	Fastening Method	Fastener Spacing (in.)	Allowable Design Load (psf)	Building Height <sup>2,5</sup> (ft.)	2012 & 2015 IBC, 2015 IRC (Ultimate Design Wind Speed, $V_{ult}$ ) <sup>4,5</sup>			2012 IRC, 2009 IBC & IRC (Basic Wind Speed, $V_{asd}$ ) <sup>4,5,6</sup>		
									Wind exposure category			Wind exposure category		
									B	C	D	B	C	D
HardiePlank Lap Siding	5/16	5.25	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing	16	51.4	0-15	189	171	156	146	133	120
								20	189	166	152	146	129	118
								25	189	163	149	146	126	116
								30	189	159	147	146	124	114
								35	185	157	145	143	122	112
								40	181	155	143	140	120	111
								45	178	153	141	138	118	110
								50	175	151	140	136	117	108
								55	173	150	139	134	116	108
								60	171	148	138	133	115	107
								65	151	131	122	117	102	95
								70	149	130	122	116	101	94
								75	148	129	121	114	100	94
80	146	128	120	113	99	93								
85	145	127	120	112	99	93								
HardiePlank Lap Siding	5/16	5.25	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing	20	44.9	0-15	176	160	145	137	124	113
								20	176	156	142	137	120	110
								25	176	152	139	137	118	108
								30	176	149	137	137	115	106
								35	173	147	135	134	114	105
								40	169	145	134	131	112	103
								45	167	143	132	129	111	102
								50	164	141	131	127	109	101
								55	162	140	130	125	108	101
								60	160	139	129	124	108	100
								65	141	123	114	109	95	89
								70	140	122	114	108	94	88
								75	138	121	113	107	94	88
80	137	120	112	106	93	87								
85	136	119	112	105	92	87								
HardiePlank Lap Siding	5/16	5.25	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing	24	40.7	0-15	168	152	138	130	118	107
								20	168	148	135	130	115	105
								25	168	145	133	130	112	103
								30	168	142	130	130	110	101
								35	164	140	129	127	108	100
								40	161	138	127	125	107	99
								45	159	136	126	123	105	98
								50	156	135	125	121	104	97
								55	154	133	124	119	103	96
								60	152	132	123	118	102	95
								65	135	117	109	104	91	84
								70	133	116	108	103	90	84
								75	132	115	108	102	89	83
80	130	114	107	101	88	83								
85	129	113	106	100	88	82								

1. Or lumbers with an assigned specific gravity of  $\geq 0.42$ .  
 2. Building height = mean roof height (in feet) of a building, except that eave height shall be used for roof angle  $\Theta$  less than or equal to  $10^\circ$  (2-12 roof slope).  
 3. Linear interpolation of building height and wind speed is permitted, except for building heights between 60 ft and 65 ft, which could be done through analysis.  
 4.  $V_{ult}$  = ultimate design wind speed;  $V_{asd}$  = nominal design wind speed.  
 5. Wind speed design assumptions per Analytical Method in ASCE 7-10 Chapter 30 C&C Part 1 and Part 3:  $K_{zt}=1$ ,  $K_d=0.85$ ,  $G_C=-1.4$  ( $h \leq 60$ ),  $G_C=-1.8$  ( $h > 60$ ),  $G_{Cpi}=0.18$ .  
 6. For 2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC, Importance Factor,  $I = 1$ , was used for calculations.



# HardieNail™ Studless Siding Fastener

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**Table 3, Wind Design Table for HardiePanel vertical siding**

**Table 3. Allowable Wind Speed (mph) for HardiePanel vertical siding (Analytical Method in ASCE 7-10 Chapter 30 C&C Part 1 and Part 3)**

Product	Thickness (in.)	Frame Type	Fastener	Fastening Method	Fastener Spacing (in.)	Allowable Design Load (psf)	Building Height <sup>2,5</sup> (ft.)	2012 & 2105 IBC, 2015 IRC (Ultimate Design Wind Speed, $V_{ult}$ ) <sup>4,5</sup>			2012 IRC, 2009 IBC & IRC (Basic Wind Speed, $V_{asd}$ ) <sup>4,5,6</sup>		
								Wind exposure			Wind exposure		
								B	C	D	B	C	D
HardiePanel Vertical Siding	5/16	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Nailed to WSP sheathing	12" x 12"	28.0	0-15	139	126	115	108	98	89
							20	139	123	112	108	95	87
							25	139	120	110	108	93	85
							30	139	118	108	108	91	84
							35	136	116	107	106	90	83
							40	134	114	105	104	88	82
							45	131	113	104	102	87	81
							50	129	112	103	100	86	80
							55	128	111	103	99	86	79
							60	126	110	102	98	85	79
							65	112	-	-	86	-	-
							70	110	-	-	85	-	-
							75	109	-	-	85	-	-
							80	108	-	-	84	-	-
85	107	-	-	83	-	-							
HardiePanel Vertical Siding	5/16	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Nailed to WSP sheathing	12" x 8"	38.7	0-15	164	149	135	127	115	105
							20	164	144	132	127	112	102
							25	164	141	129	127	109	100
							30	164	138	127	127	107	99
							35	160	136	126	124	106	97
							40	157	134	124	122	104	96
							45	155	133	123	120	103	95
							50	152	131	122	118	102	94
							55	150	130	121	116	101	93
							60	149	129	120	115	100	93
							65	131	114	106	102	88	82
							70	130	113	106	100	88	82
							75	128	112	105	99	87	81
							80	127	111	104	98	86	81
85	126	111	104	97	86	80							

1. Or lumbers with an assigned specific gravity of  $\geq 0.42$ .  
 2. Building height = mean roof height (in feet) of a building, except that eave height shall be used for roof angle  $\Theta$  less than or equal to  $10^\circ$  (2-12 roof slope).  
 3. Linear interpolation of building height and wind speed is permitted, except for building heights between 60 ft and 65 ft, which could be done through analysis.  
 4.  $V_{ult}$  = ultimate design wind speed;  $V_{asd}$  = nominal design wind speed.  
 5. Wind speed design assumptions per Analytical Method in ASCE 7-10 Chapter 30 C&C Part 1 and Part 3:  $K_{zt}=1$ ,  $K_d=0.85$ ,  $G_C=-1.4$  ( $h \leq 60$ ),  $G_C=-1.8$  ( $h > 60$ ),  $G$   
 6. For 2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC, Importance Factor,  $I = 1$ ,  $w$  as used for calculations.



# HardieNail™ Studless Siding Fastener

All national, state, and local building code requirements must be followed and where they are more stringent than the James Hardie installation requirements, state and local requirements will take precedence.

**Table 4, Wind Design Table for HardieShingle Panel siding**

**Table 4. Allowable Wind Speed (mph) for HardieShingle Panel siding (Analytical Method in ASCE 7-10 Chapter 30 C&C Part 1 and Part 3)**

Product	Thickness (in.)	Frame Type	Fastener	Fastening Method	Fastener Spacing (in.)	Allowable Design Load (psf)	Building Height <sup>2,5</sup> (ft.)	2012 & 2105 IBC, 2015 IRC (Ultimate Design Wind Speed, V <sub>ult</sub> ) <sup>4,5</sup>			2012 IRC, 2009 IBC & IRC (Basic Wind Speed, V <sub>asd</sub> ) <sup>4,5,6</sup>		
								Wind exposure			Wind exposure		
								B	C	D	B	C	D
HardieShingle Panel Siding	1/4	2x4 SPF <sup>1</sup> wood stud at 24" o.c., with 7/16" OSB attached per code	HardieNail Studless Siding Fastener, 0.117" x 1.125" x 0.300"	Blind nailed to WSP sheathing at 7" exposure	16"	30.7	0-15	146	132	120	113	102	93
							20	146	129	117	113	100	91
							25	146	126	115	113	97	89
							30	146	123	113	113	95	88
							35	143	121	112	111	94	87
							40	140	120	110	108	93	86
							45	138	118	109	107	92	85
							50	136	117	108	105	91	84
							55	134	116	107	104	90	83
							60	132	115	107	102	89	83
							65	117	102	-	90	79	-
							70	116	101	-	89	78	-
							75	114	-	-	88	-	-
80	113	-	-	88	-	-							
85	112	-	-	87	-	-							

1. Or lumbers with an assigned specific gravity of  $\geq 0.42$ .
2. Building height = mean roof height (in feet) of a building, except that eave height shall be used for roof angle  $\Theta$  less than or equal to  $10^\circ$  (2-12 roof slope).
3. Linear interpolation of building height and wind speed is permitted, except for building heights between 60 ft and 65 ft, which could be done through analysis.
4. V<sub>ult</sub> = ultimate design wind speed; V<sub>asd</sub> = nominal design wind speed.
5. Wind speed design assumptions per Analytical Method in ASCE 7-10 Chapter 30 C&C Part 1 and Part 3: K<sub>z</sub>=1, K<sub>d</sub>=0.85, GC<sub>p</sub>=-1.4 (h≤60), GC<sub>p</sub>=-1.8 (h>60), G
6. For 2012 IRC, 2009 IBC/IRC, 2006 IBC/IRC, Importance Factor, I = 1, w as used for calculations.