



INSTALLATION REQUIREMENTS - PRIMED & COLORPLUS® PRODUCTS

IMPORTANT: FAILURE TO INSTALL AND FINISH THIS PRODUCT IN ACCORDANCE WITH APPLICABLE BUILDING CODES AND JAMES HARDIE WRITTEN APPLICATION INSTRUCTIONS MAY LEAD TO PERSONAL INJURY, AFFECT SYSTEM PERFORMANCE, VIOLATE LOCAL BUILDING CODES, AND VOID THE PRODUCT ONLY WARRANTY. BEFORE INSTALLATION, CONFIRM THAT YOU ARE USING THE CORRECT HARDIEZONE INSTRUCTIONS. TO DETERMINE WHICH HARDIEZONE APPLIES TO YOUR LOCATION, VISIT WWW.HARDIEZONE.COM OR CALL 1-866-942-7343 (866 9HARDIE)

STORAGE & HANDLING:

Store flat and keep dry and covered prior to installation. Installing siding wet or saturated may result in shrinkage at butt joints. Carry planks on edge. Protect edges and corners from breakage. James Hardie is not responsible for damage caused by improper storage and handling of the product.



CUTTING INSTRUCTIONS

OUTDOORS

1. Position cutting station so that airflow blows dust away from the user and others near the cutting area.
2. Cut using one of the following methods:
 - a. Best: Circular saw equipped with a HardieBlade® saw blade and attached vacuum dust collection system. Shears (manual, pneumatic or electric) may also be used, not recommended for products thicker than 7/16 in.
 - b. Better: Circular saw equipped with a dust collection feature (e.g. Roan® saw) and a HardieBlade saw blade.
 - c. Good: Circular saw equipped with a HardieBlade saw blade.

INDOORS

DO NOT grind or cut with a power saw indoors. Cut using shears (manual, pneumatic or electric) or the score and snap method, not recommended for products thicker than 7/16 in.

- DO NOT dry sweep dust; use wet dust suppression or vacuum to collect dust.
- For maximum dust reduction, James Hardie recommends using the "Best" cutting practices. Always follow the equipment manufacturer's instructions for proper operation.
- For best performance when cutting with a circular saw, James Hardie recommends using HardieBlade® saw blades.
- Go to jameshardiepros.com for additional cutting and dust control recommendations.

IMPORTANT: The Occupational Safety and Health Administration (OSHA) regulates workplace exposure to silica dust. For construction sites, OSHA has deemed that cutting fiber cement with a circular saw having a blade diameter less than 8 inches and connected to a commercially available dust collection system per manufacturer's instructions results in exposures below the OSHA Permissible Exposure Limit (PEL) for respirable crystalline silica, without the need for additional respiratory protection.

If you are unsure about how to comply with OSHA silica dust regulations, consult a qualified industrial hygienist or safety professional, or contact your James Hardie technical sales representative for assistance. James Hardie makes no representation or warranty that adopting a particular cutting practice will assure your compliance with OSHA rules or other applicable laws and safety requirements.

GENERAL REQUIREMENTS:

- References to the 2015 National Building Code (NBC) of Canada are made throughout this document. Local building code requirements may supersede the NBC in some locations.
- HardieSoffit® panels may be installed as a soffit or ceiling over either wood or steel 20 gauge (33 mils) minimum to 16 gauge (54 mils) framing complying with the local building code. Install soffits to nominal 2 x 4 framing members spaced a maximum of 610mm (24") on center (fig. 4), with the long dimension perpendicular to the rafter or joist framing.
- All edges must be supported by framing. (figs. 3 & 4)
- Install water barriers (compliant with Part 9.27.3.2 of the NBC) and air barriers as required by local building codes. James Hardie will assume no responsibility for moisture infiltration.
- DO NOT use stain on James Hardie® products.
- James Hardie Building Products provides installation /wind load information for buildings with a maximum mean roof height of 25.9m (85 ft).

INSTALLATION:

- HardieSoffit® panels must be fastened to a solid, nailable substrate such as a wood 2x subfascia.
- Additional framing may be needed to ensure proper fastening.
- Soffits can be installed as shown in figure 1. Position the vent holes toward the outside of the eave for optimal airflow.
- 305mm (12") to 610mm (24") wide Vented HardieSoffit panels, provide [5 square inches of net free ventilation per lineal foot].
- Alternatively vents can be installed into non-vented soffit.
- If necessary, an insect screen can be installed using construction adhesive. Note: net free ventilation will be reduced.

Fastener Requirements

- Position fasteners 9.5mm (3/8") from panel edges and no closer than 50mm (2") away from corners when using soffit greater than 305mm (12") wide (fig. 4) and no closer than 25mm (1") away from corners when using soffit that is less than or equal to 305mm (12") wide (fig. 3).

Jointing Methods

- Install panels in moderate contact at ends, provide PVC or metal jointers, battens or leave appropriate gap and caulk (fig 2).

Figure 2
moderate contact

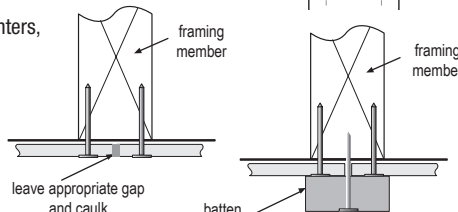
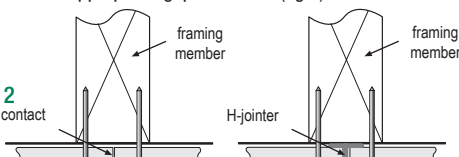
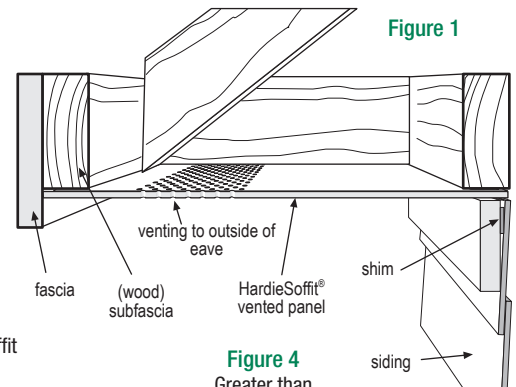


Figure 3
less than or equal to
305mm (12") Wide Soffit

Figure 4
Greater than
305mm (12") Wide Soffit



Maintain a minimum 25mm (1") gap between gutter end caps and siding & trim.

Figure 5

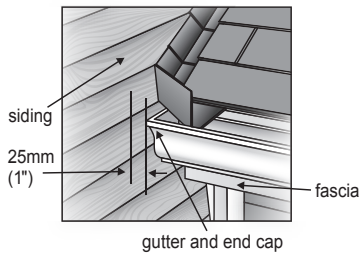
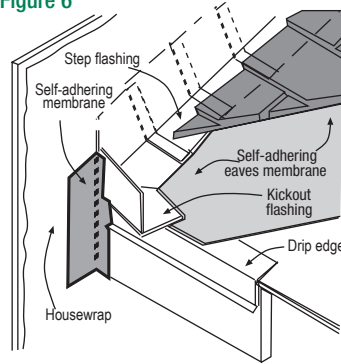


Figure 6



KICKOUT FLASHING

Because of the volume of water that can pour down a sloped roof, one of the most critical flashing details occurs where a roof intersects a sidewall. The roof must be flashed with step flashing. Where the roof terminates, install a kickout to deflect water away from the siding.

It is best to install a self-adhering membrane on the wall before the subfascia and trim boards are nailed in place, and then come back to install the kickout.

Figure 6, Kickout Flashing To prevent water from dumping behind the siding and the end of the roof intersection, install a "kickout" as required by IRC code R905.2.8.3 : "...flashing shall be a min. of 4" high and 4" wide." James Hardie recommends the kickout be angled between 100° - 110° to maximize water deflection

FASTENER REQUIREMENTS

- Fasteners must be installed with a minimum 9.5mm (3/8") edge distance and 50mm (2") clearance from end of panel.
For wood frame construction a minimum 4d common nails spaced 200mm (8") o.c. at panel edges and intermediate framing members spaced up to 610mm (24") on center are suitable in most locations*.
- For conventional 20ga - 16ga steel frame construction a minimum No. 8-18 x 8.2mm x 25mm (1") long ribbed bugle screws spaced 150mm (6") o.c. at panel edges and intermediate framing members spaced up to 610mm (24") on center are suitable in most locations*.

*Minimum Basic Wind Speed differs by locality. Where specified levels of wind resistance are required, refer to tables 1 & 2 in this document.

GENERAL FASTENING REQUIREMENTS

Fasteners must be corrosion resistant, galvanized, or stainless steel. Electro-galvanized are acceptable but may exhibit premature corrosion. James Hardie recommends the use of quality, hot-dipped galvanized nails. James Hardie is not responsible for the corrosion resistance of fasteners. Stainless steel fasteners are recommended when installing James Hardie® products near the ocean, large bodies of water, or in very humid climates.

Manufacturers of ACQ and CA preservative-treated wood recommend spacer materials or other physical barriers to prevent direct contact of ACQ or CA preservative-treated wood and aluminum products. Fasteners used to attach HardieTrim Tabs to preservative-treated wood shall be of hot dipped zinc-coated galvanized steel or stainless steel and in accordance to 2009 IRC R317.3 or 2009 IBC 2304.9.5

- Consult applicable code compliance report for correct fasteners type and placement to achieve specified design wind loads.
- NOTE: Published wind loads may not be applicable to all areas where Local Building Codes have specific jurisdiction. Consult James Hardie Technical Services if you are unsure of applicable compliance documentation.
- Drive fasteners perpendicular to siding and framing.
- Fastener heads should fit snug against siding (no air space). (fig. A)
- Do not over-drive nail heads or drive nails at an angle.
- If nail is countersunk, fill hole and add a nail. (fig. B)
- For wood framing, under driven nails should be hit flush to the plank with a hammer (For steel framing, remove and replace nail).
- Do not use aluminum fasteners, staples, or clipped head nails.**

PNEUMATIC FASTENING

James Hardie products can be hand nailed or fastened with a pneumatic tool. Pneumatic fastening is highly recommended. Set air pressure so that the fastener is driven snug with the surface of the siding. A flush mount attachment on the pneumatic tool is recommended. This will help control the depth the nail is driven. If setting the nail depth proves difficult, choose a setting that under drives the nail. (Drive under driven nails snug with a smooth faced hammer - Does not apply for installation to steel framing).

Figure A

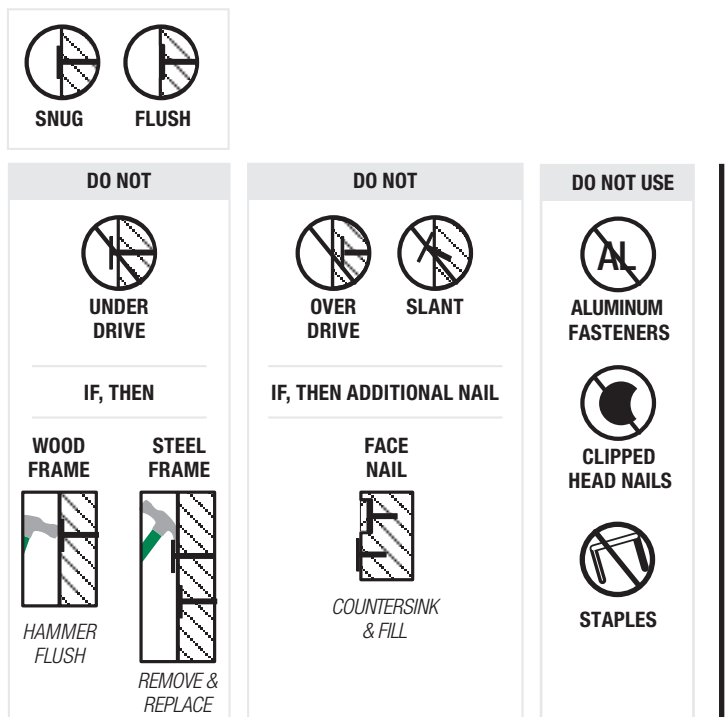


Figure B



CUT EDGE TREATMENT

Caulk, paint or prime all field cut edges. James Hardie touch-up kits are required to touch-up ColorPlus products.

CAULKING

Elastomeric Joint Sealant is required in accordance with Part 9.27.4 of the NBC, complying with ASTM C920 Grade NS, Class 25 or higher or a Latex Joint Sealant complying with ASTM C834. Caulking/Sealant must be applied in accordance with the caulking/sealant manufacturer's written instructions. Note: some caulking manufacturers do not allow "tooling".

PAINTING

DO NOT use stain, oil/alkyd base paint, or powder coating on James Hardie® Products. James Hardie products must be painted within 180 days for primed product and 90 days for unprimed. 100% acrylic topcoats are recommended. Do not paint when wet. For application rates refer to paint manufacturers specifications. Back-rolling is recommended if the siding is sprayed.

COLORPLUS® TECHNOLOGY CAULKING, TOUCH-UP & LAMINATE

- Care should be taken when handling and cutting James Hardie ColorPlus products. During installation use a wet soft cloth or soft brush to gently wipe off any residue or construction dust left on the product, then rinse with a garden hose.
- Touch up nicks, scrapes and nail heads using the ColorPlus® Technology touch-up applicator. Touch-up should be used sparingly. If large areas require touch-up, replace the damaged area with new HardieTrim® batten boards with ColorPlus Technology.
- Laminate sheet must be removed immediately after installation.
- Terminate non-factory cut edges into trim where possible, and caulk. Color matched caulks are available from your ColorPlus® product dealer.
- Treat all other non-factory cut edges using the ColorPlus Technology edge coat, available from your ColorPlus product dealer.

Note: James Hardie does not warrant the usage of third party touch-up or paints used as touch-up on James Hardie ColorPlus products.

Problems with appearance or performance arising from use of third party touch-up paints or paints used as touch-up that are not James Hardie touch-up, will not be covered under the James Hardie ColorPlus Limited Finish Warranty.

PAINTING JAMES HARDIE® SIDING AND TRIM PRODUCTS WITH COLORPLUS® TECHNOLOGY

When repainting ColorPlus products, James Hardie recommends the following regarding surface preparation and topcoat application:

- Ensure the surface is clean, dry, and free of any dust, dirt, or mildew
- Repriming is normally not necessary
- 100% acrylic topcoats are recommended
- DO NOT use stain, oil/alkyd base paint, or powder coating on James Hardie® Products.
- Apply finish coat in accordance with paint manufacturers written instructions regarding coverage, application methods, and application temperature
- DO NOT caulk nail heads when using ColorPlus products, refer to the ColorPlus touch-up section

COMPLIANCE:

HardieSoffit panels comply with ASTM Specification C1186 (Grade II, Type A) and ISO Standard 8336 (Category A, Class 2, Level I). When tested in accordance with CAN/ULC-S102, the product is recognized to have the following properties: Flame Spread Rating: 0, Smoke Developed Classification: 0. When tested in accordance with CAN/ULC-S114, the product is recognized as noncombustible.





WIND LOAD TABLE

Table 1 – Ultimate wind load for non-vented HardieSoffit® panels

PRODUCT THICKNESS	FASTENER TYPE	FASTENER SPACING	FRAME TYPES	MAXIMUM STUD SPACING	ULTIMATE LOAD @ FAILURE	
					(kPa)	(psf)
4.5mm (.2")	4d common nail 38 mm (1.5") long	150 mm (6") on center	Nominal 2 x wood (s.g. $\geq .42$)	406mm (16")	4.48	93.5
4.5mm (.2")	Min. No. 8 x 8.2 mm HD x 25 mm (1") long ribbed bugle head screw	150 mm (6") on center	Min. No. 20 ga x 92 mm x 35 mm (1.4") metal framing	406mm (16")	4.69	97.9
6.4mm (.25")	4d common nail 38 mm (1.5") long	200 mm (8") on center	Nominal 2 x wood (s.g. $\geq .42$)	406mm (16")	4.24	88.6
6.4mm (.25")	4d common nail 38 mm (1.5") long	200 mm (8") on center	Nominal 2 x wood (s.g. $\geq .42$)	406mm (16")	3.07	64.2
6.4mm (.25")	Min. No. 8 x 8.2 mm HD x 25 mm (1") long ribbed bugle head screw	150 mm (6") on center	Min. No. 20 ga x 92 mm x 35 mm (1.4") metal framing	610mm (24")	8.13	169.9

Table 2 – Ultimate wind load for Vented HardieSoffit panel

PRODUCT THICKNESS (mm)	FASTENER TYPE	FASTENER SPACING	FRAME TYPES	MAXIMUM STUD SPACING (mm)	ULTIMATE LOAD @ FAILURE	
					(kPa)	(psf)
6.4mm (.25")	Minimum 2.1 mm x 4.8 mm HD x 38 mm (1.5") long OR Min. No. 8 x 8.2 mm HD 25 mm (1") long ribbed bugle head screw	200 mm (8") on center at all bearing edges	Nominal 2 x wood (s.g. $\geq .40$) OR Min. No. 20 ga x 92 mm x 35 mm (1.4") metal framing	406mm (16")	3.38	81

METRIC TO IMPERIAL CONVERSION TABLE

The following table provides a conversion of the nominal metric measurements presented in these installation instructions to nominal Imperial fraction measurement values

mm	inches	mm	inches	mm	inches	mm	inches
2.3	3/32	7.5	5/16	32	1-1/4	203	8
2.4	3/32	8.2	21/64	35	1-3/8	210	8-1/4
2.9 1/8		92	3/64	38	1-1/2	241	9-1/2
31	1/8	9.5	3/8	41	1-5/8	305	12
5.6	7/32	11.1	7/16	50	2	406	16
5.7	7/32	12	15/32	91	3-5/8	610	24
61	5/64	19	3/4	150	6		
6.7	17/64	25	1	190	7-1/2		

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SILICA WARNING

DANGER: May cause cancer if dust from product is inhaled. Causes damage to lungs and respiratory system through prolonged or repeated inhalation of dust from product. Refer to the current product Safety Data Sheet before use. The hazard associated with fiber cement arises from crystalline silica present in the dust generated by activities such as cutting, machining, drilling, routing, sawing, crushing, or otherwise abrading fiber cement, and when cleaning up, disposing of or moving the dust. When doing any of these activities in a manner that generates dust you must (1) comply with the OSHA standard for silica dust and/or other applicable law, (2) follow James Hardie cutting instructions to reduce or limit the release of dust; (3) warn others in the area to avoid breathing the dust; (4) when using mechanical saw or high speed cutting tools, work outdoors and use dust collection equipment; and (5) if no other dust controls are available, wear a dust mask or respirator that meets NIOSH requirements (e.g. N-95 dust mask). During clean-up, use a well maintained vacuum and filter appropriate for capturing fine (respirable) dust or use wet clean-up methods - never dry sweep.

WARNING: This product can expose you to chemicals including respirable crystalline silica, which is known to the State of California to cause cancer. For more information go to P65Warnings.ca.gov.

