INSTALLATION REQUIREMENTS - PRIMED & COLORPLUS® PRODUCTS

SELECT CEDARMILL® • SMOOTH • COLONIAL SMOOTH® • COLONIAL ROUGHSAWN® • BEADED CEDARMILL® • BEADED SMOOTH • STRAIGHT-EDGE SHINGLE PLANK

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™ PRODUCTS 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.

OUTDOORS
1. Position cutting station so that wind will blow dust away from user and others in working area.
2. Use one of the following methods:
   a. Best: i. Score and snap ii. Shears (manual, electric or pneumatic)
   b. Better: i. Dust reducing circular saw equipped with a HardieBlade® saw blade and HEPA vacuum extraction
   c. Good: i. Dust reducing circular saw with a HardieBlade saw blade (only use for low to moderate cutting)
   - NEVER use a power saw indoors
   - NEVER use a circular saw blade that does not carry the HardieBlade saw blade trademark
   - NEVER dry sweep – Use wet suppression or HEPA Vacuum

INDOORS
1. Cut only using score and snap, or shears (manual, electric or pneumatic). 
2. Position cutting station in well-ventilated area

Important Note: For maximum protection (lowest respirable dust production), James Hardie recommends always using "Best"-level cutting methods where feasible.

NOSH-approved respirators can be used in conjunction with above cutting practices to further reduce dust exposures. Additional exposure information is available at www.jameshardie.com to help you determine the most appropriate cutting method for your job requirements. If concern still exists about exposure levels or you do not comply with the above practices, you should always consult a qualified industrial hygienist or contact James Hardie for further information.

GENERAL REQUIREMENTS:
• HardiePlank® lap siding can be installed over braced wood or steel studs spaced a maximum of 24” o.c. or directly to minimum 7/16” thick OSB sheathing. Irregularities in framing and sheathing can mirror through the finished application.
• HardiePlank lap siding can also be installed over foam insulation/sheathing up to 1” thick. When using foam insulation/sheathing, avoid over-driving nails (fasteners), which can result in dimpling of the siding due to the compressible nature of the foam insulation/sheathing. Extra caution is necessary if power-driven nails (fasteners) are used for attaching siding over foam insulation/sheathing.
• A water-resistive barrier is required in accordance with local building code requirements. The water-resistive barrier must be appropriately installed with penetration and junction flashing in accordance with local building code requirements. James Hardie makes no responsibility for water infiltration. James Hardie does manufacture HardieWrap® Weather Barrier, a non-woven non-perforated housewrap¹, which complies with building code requirements.
• When installing James Hardie products all clearance details in figs. 3, 4, 5, 6, 7, 8, & 9 must be followed.
• Adjacent finished grade must slope away from the building in accordance with local building codes - typically a minimum of 6” in the first 10’.
• Do not use HardiePlank lap siding in Fascia or Trim applications.
• Do not install James Hardie products, such that they may remain in contact with standing water.
• HardiePlank lap siding may be installed on flat vertical wall applications only.
• DO NOT use stain on James Hardie® products.
• For larger projects, including commercial and multi-family projects, where the span of the wall is significant in length, the designer and/or architect should take into consideration the coefficient of thermal expansion and moisture movement of the product in their design. These values can be found in the Technical Bulletin “Expansion Characteristics of James Hardie® Siding Products” at www.JamesHardie.com.

INSTALLATION:

JOINT TREATMENT
• Joint flashing behind field butt joints is required for ColorPlus and recommended for primed products.
• DO NOT Caulk field butt joints on ColorPlus siding.*
• It is OK to Caulk field butt joints on James Hardie primed siding products that is to be field painted.**
• DO caulk where HardiePlank® meets vertical trim.

*Note: Caulking at field butt joints is not recommended for ColorPlus for aesthetic reasons as the caulking and ColorPlus will wear differently.

**Note: Field painting over caulking may produce a sheen difference when compared to the field painted PrimePlus. ***Refer to Caulking section in these instructions.

FOR ADDITIONAL INFORMATION ON HARDIEWRAP® WEATHER BARRIER, CONTACT JAMES HARDIE AT 1-866-4HARDIE OR www.hardiewrap.com

WARNING: AVOID BREATHING SILICA DUST
James Hardie® products contain respirable crystalline silica, which is known to the State of California to cause cancer and is considered by IARC and NIOSH to be a cause of cancer from some occupational sources. Breathing excessive amounts of respirable silica dust can also cause a disabling and potentially fatal lung disease called silicosis, and has been linked with other diseases. Some studies suggest smoking may increase these risks. During installation or handling: (1) work in outdoor areas with ample ventilation; (2) use fiber cement shears for cutting or, where not feasible, use a HardieBlade saw blade and dust-reducing circular saw attached to a HEPA vacuum; (3) warn others in the immediate area; (4) wear a properly-fitted, NIOSH-approved dust mask or respirator (e.g. N-95) in accordance with applicable government regulations and manufacturer instructions to further limit respirable silica exposures. During cleanup, use HEPA vacuums or wet cleanup methods - never dry sweep. For further information, refer to our installation instructions and Material Safety Data Sheet available at www.jameshardie.com or by calling 1-800-9HARDIE (1-800-942-7343). FAILURE TO ADHERE TO OUR WARNINGS, MSDS, AND INSTALLATION INSTRUCTIONS MAY LEAD TO SERIOUS PERSONAL INJURY OR DEATH.
**CLEARANCES**

Install siding and trim products in compliance with local building code requirements for clearance between the bottom edge of the siding and the adjacent finished grade.

*When face nailing to OSB, planks must be no greater than 9 1/4" wide and fasteners must be 12" o.c. or less.*

Laminate sheet to be removed immediately after installation of each course for ColorPlus® products.

**FASTENER REQUIREMENTS**

**BLIND NAILING**

**Nails - Wood Framing**

- Siding nail (0.09" shank x 0.221" HD x 2" long)
- 11ga. roofing nail (0.121" shank x 0.371" HD x 1.25" long)

**Screws - Steel Framing**

- Ribbed Wafer-head or equivalent (No. 8 x 1 1/4" long x 0.375" HD) Screws must penetrate 3 threads into metal framing.

**Nails - Steel Framing**

- ET & F Panellast® nails or equivalent (0.10" shank x 0.313" HD x 1-1/2" long)
  Nails must penetrate minimum 1/4" into metal framing.

**OSB minimum 7/16"**

- 11ga. roofing nail (0.121" shank x 0.371" HD x 1.75" long)
- Ribbed Wafer-head or equivalent (No. 8 x 1 5/8" long x 0.375" HD).

**FACE NAILING**

**Nails - Wood Framing**

- 6d (0.113" shank x 0.267" HD x 2" long)
- Siding nail (0.09" shank x 0.221" HD x 2" long)

**Screws - Steel Framing**

- Ribbed Bugle-head or equivalent (No. 8-18 x 1-5/8" long x 0.323" HD) Screws must penetrate 3 threads into metal framing.

**Nails - Steel Framing**

- ET & F pin or equivalent (0.10" shank x 0.25" HD x 1-1/2" long)
  Nails must penetrate minimum 1/4" into metal framing.

**OSB minimum 7/16"**

- Siding nail (0.09" shank x 0.221" HD x 1-1/2" long)*

**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.

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.

Laminate sheet to be removed immediately after installation of each course for ColorPlus® products.

*The illustration (figure 9) and associated text was reprinted with permission of THE JOURNAL OF LIGHT CONSTRUCTION. For subscription information, visit www.jlconline.com.*

* When face nailing to OSB, planks must be no greater than 9 1/4" wide and fasteners must be 12" o.c. or less.

**Also see General Fastening Requirements; and when considering alternative fastening options refer to James Hardie’s Technical Bulletin USTB 17 - Fastening Tips for HardiePlank® Lap Siding.**
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 nail 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
- snug
- flush
- countersunk, fill & add nail

Figure B
- DO NOT under drive nails
- DO NOT staple

PAINTING
DO NOT use stain 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.

CUT EDGE TREATMENT
Caulk, paint or prime all field cut edges.

CAULKING
For best results use an Elastomeric Joint Sealant 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: OSI Quad as well as some other caulking manufacturers do not allow tooling.

COLORPLUS® TECHNOLOGY CAULKING, TOUCH-UP & LAMINATE
- Touch up nicks, scrapes and nail heads using the ColorPlus® Technology touch-up applicator. Touch-up paint should be used sparingly. If large areas require touch-up, replace the damaged area with new HardiePlank® lap siding with ColorPlus® Technology.
- Laminate sheet must be removed immediately after installation of each course.
- 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 coaters, available from your ColorPlus product dealer.

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 or oil/alkyd base paints on James Hardie® products
- Apply finish coat in accordance with paint manufacturers written instructions regarding coverage, application methods, and application temperature
COVERAGE CHART/ESTIMATING GUIDE
Number of 12’ planks, does not include waste

<table>
<thead>
<tr>
<th>COVERAGE AREA LESS OPENINGS (1 SQ = 100 sq.ft.)</th>
<th>HARDIEPLANK® LAP SIDING WIDTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQ (exposure)</td>
<td>5 1/4</td>
</tr>
<tr>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
</tr>
<tr>
<td>3</td>
<td>75</td>
</tr>
<tr>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td>5</td>
<td>125</td>
</tr>
<tr>
<td>6</td>
<td>150</td>
</tr>
<tr>
<td>7</td>
<td>175</td>
</tr>
<tr>
<td>8</td>
<td>200</td>
</tr>
<tr>
<td>9</td>
<td>225</td>
</tr>
<tr>
<td>10</td>
<td>250</td>
</tr>
<tr>
<td>11</td>
<td>275</td>
</tr>
<tr>
<td>12</td>
<td>300</td>
</tr>
<tr>
<td>13</td>
<td>325</td>
</tr>
<tr>
<td>14</td>
<td>350</td>
</tr>
<tr>
<td>15</td>
<td>375</td>
</tr>
<tr>
<td>16</td>
<td>400</td>
</tr>
<tr>
<td>17</td>
<td>425</td>
</tr>
<tr>
<td>18</td>
<td>450</td>
</tr>
<tr>
<td>19</td>
<td>475</td>
</tr>
<tr>
<td>20</td>
<td>500</td>
</tr>
</tbody>
</table>

This coverage chart is meant as a guide. Actual usage is subject to variables such as building design. James Hardie does not assume responsibility for over or under ordering of product.

ADDITIONAL HANDLING REQUIREMENTS
IMPORTANT: To prevent damage to the drip edge, extra care should be taken when removing planks from the pallet, while handling, and when installing with a lap gauge. Planks are interlocked together on the pallet, therefore they should be removed from the pallet horizontally (side to side) to allow planks to unlock themselves from one another.

Pull from across the stack

Do not go down the stack


© 2011 James Hardie Technology Limited. All rights reserved. TM, SM, and ® denote trademarks or registered trademarks of James Hardie Technology Limited. is a registered trademark of James Hardie Technology Limited. Panelfast is a registered trademark of ET&F Fastening Systems, Inc.

Additional Installation Information, Warranties, and Warnings are available at www.jameshardie.com