

SECTION 07250

WEATHER BARRIER

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\*\* NOTE TO SPECIFIER \*\* James Hardie Building Products, Inc.; air and moisture barrier system.
 .
 This section is based on the products of James Hardie Building Products, Inc., which is located at:
26300 La Alameda Suite 400
Mission Viejo, CA 92691
Toll Free Tel: 866-274-3464
Tel: 949-367-4980
Email: [request info (info@jameshardie.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=James%20Hardie%20Building%20Products,%20Inc.&coid=33418&rep=&fax=&message=RE:%20Spec%20Question%20(07250jhi):%20%20&mf=)
Web: www.jameshardiecommercial.com
[ [Click Here](http://www.arcat.com/arcatcos/cos33/arc33418.html) ] for additional information.

 We have operations in the United States, Australia, New Zealand, Asia, and Europe. No matter where we operate, our goal is to remain at the forefront of industry, capitalizing on our global leadership in building products and manufacturing and technology for both new home construction and remodeling.

 At James Hardie, we create innovative products that increase the beauty, value, safety and durability of the buildings you design. Explore increased design options through our wide variety of products, and enjoy superior performance that allows your designs to last a lifetime.

 Building Wrap and Related Products
 James Hardie Building Products, Inc. HardieWrap:
 The HardieWrap™ weather barrier solution is comprised of HardieWrap™ weather barrier, HardieWrap™ Flashing, HardieWrap™ Flex Flashing and HardieWrap™ Seam Tape. It all adds up to the kind of protection a home deserves and the kind of protection your customers demand.

 Green and Sustainable
 We support the entire building industry's efforts in creating materials that deliver more sustainable homes, neighborhoods and commercial buildings. Together, we hope to provide a better built environment that will endure years to come.

1. GENERAL
	1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Sheet applied weather barrier and related accessories for wall air/moisture barrier system.
	1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 05400 - Light Gage Metal Framing: Wall framing and bracing.
		2. Section 06100 - Rough Carpentry: Wood framing and bracing.
		3. Section 06100 - Rough Carpentry: Sheathing.
		4. Section 07210 - Insulation: Exterior wall insulation.
		5. Section 07460 - Siding: Wall finish and primary weather barrier.
	1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. The American Association of Textile Chemists and Colorists (AATCC) 127 - Water Resistance: Hydrostatic Pressure Test.
		2. American Society for Testing and Materials (ASTM) E-96 - Standard Test Methods for Water Vapor Transmission of Materials.
		3. American Society for Testing and Materials (ASTM) D1117 - Standard Guide for Evaluating Nonwoven Fabrics.
		4. American Society for Testing and Materials (ASTM) D3330 - Standard Test Method for Peel Adhesion of Pressure-Sensitive Tape1.
		5. American Society for Testing and Materials (ASTM) D3759 - Standard Test Method for Tensile Strength and Elongation of Pressure-Sensitive Tapes.
		6. PSTC-1 - Peel Adhesion of Single Coated Pressure-Sensitive Tapes at 180 Degree Angle.
		7. TAPPI T-460 - Porosity - Gurley.
	1. SYSTEM DESCRIPTION
		1. The airtight components and secondary moisture protection of the building enclosure and the joints, junctures and transitions between materials, products, and assemblies forming the air-tightness and moisture barrier of the building enclosure are called "the air/moisture barrier system". Services include coordination between the trades, the proper scheduling and sequencing of the work, preconstruction meetings, inspections, tests, and related actions, including reports performed by Contractor, by independent agencies, and by governing authorities. They do not include contract enforcement activities performed by the Architect.
		2. Air Barrier Penetrations: All penetrations of the air/moisture barrier and paths of air infiltration / exfiltration through the air/moisture barrier system shall be made air-tight.
		3. Moisture Barrier Penetrations: All penetrations of the air/moisture barrier and paths of water migration through the air/moisture barrier system shall be made water shedding.
	2. SUBMITTALS
		1. Submit under provisions of Section 01300.
		2. Product Data: Manufacturer's data sheets on each product to be used, including:
			1. Preparation instructions and recommendations.
			2. Storage and handling requirements and recommendations.
			3. Installation methods.
	3. QUALITY ASSURANCE

\*\* NOTE TO SPECIFIER \*\* Add installer quality assurance provisions. Delete if not required.

* + 1. Installer Qualifications: Minimum of 2 years experience with installation of similar products.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a mock-up for evaluation of surface preparation and sealing techniques and application workmanship.
			1. Finish areas designated by Architect.
			2. Do not proceed with remaining work until workmanship is approved by Architect.
			3. Repair mock-up area as required to produce acceptable work.
	1. DELIVERY, STORAGE, AND HANDLING
		1. Store products in manufacturer's unopened packaging until ready for installation.
		2. Do not store in direct sunlight. Weather barrier shall be stored in a covered area. Do not expose to building site chemicals.
		3. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.
	2. PROJECT CONDITIONS
		1. Anticipate environmental conditions and schedule installation when conditions are within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
	3. WARRANTY
		1. Product Warranty: Limited product warranty against manufacturing defects.
			1. HardieWrap Weather Barrier and related products for 10 years.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: James Hardie Building Products, Inc., which is located at: 26300 La Alameda Suite 400 ; Mission Viejo, CA 92691; Toll Free Tel: 866-274-3464; Tel: 949-367-4980; Email: [request info (info@jameshardie.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=James%20Hardie%20Building%20Products,%20Inc.&coid=33418&rep=&fax=&message=RE:%20Spec%20Question%20(07250jhi):%20%20&mf=); Web: www.jameshardiecommercial.com

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
		2. Requests for approval of equal substitutions will be considered in accordance with provisions of Section 01600.

\*\* NOTE TO SPECIFIER \*\* James Hardie® Building Products pioneered a superior technology. The HardieWrap weather barrier solution includes HardieWrap weather barrier, HardieWrap Flashing, HardieWrap™ Flex Flashing and HardieWrap™ Seam Tape. A water-resistive barrier is required in accordance with local building code requirements. The water-resistive barrier must be installed with penetration and junction flashing in strict accordance with local building code requirements.

* 1. WEATHER BARRIER SYSTEM

\*\* NOTE TO SPECIFIER \*\* HardieWrap™ weather barrier is a non-woven, non-perforated polyolefin water-resistive barrier, per AC38, manufactured by James Hardie Building Products. HardieWrap™ weather barrier provides a balance of water resistance and breathability to protect homes from the elements of weather that can get behind the exterior cladding. HardieWrap™ Flashing and HardieWrap™ Seam Tape are recommended in conjunction with HardieWrap™ weather barrier to complete the HardieWrap weather barrier solution\*.

* + 1. Moisture Air Barrier Sheet:
			1. Product: HardieWrap Weather Barrier as manufactured by James Hardie Building Systems.
			2. Composition: Non-woven, non-perforated polyolefin.
			3. Film: MicroTech Coating with micropores to balance water holdout and breathability.
			4. Thickness: 11 mil (0.28 mm).
			5. UV Stability: Up to 180 days.
			6. Water Holdout (AATCC127): 128 inches (3250 mm).
			7. Breathability/Water Vapor Permeance (ASTM E-96A): 15 perms.
			8. Air Resistance (TAPPI T-460): >1800 sec/100 cc.
			9. Tear Strength (ASTM D1117): 15 to 18 lb (6.8 to 8.2 kg).
			10. Basis Weight: 19.4 lbs/1000 sf (9.5 kgs/100 sm).
			11. Sizes: 3 feet by 195 feet (914 mm by 59.4 m), 9 feet by 100 feet (2743 mm by 30.5 m), 9 feet by 150 feet (2743 mm by 45.7 m), 10 feet by 100 feet (3048 mm by 30.5 m), 10 feet by 150 feet (3048 mm by 45.7 m).

\*\* NOTE TO SPECIFIER \*\* HardieWrap™ Flashing is designed to peel and stick around windows and doors to prevent water and air intrusion. Progressive adhesion and contains no asphalt, VOCs or solvents.

* + 1. Self-adhering Flashing: Designed for peel and stick application.
			1. Product: HardieWrap Flashing as manufactured by James Hardie Building Systems.
			2. Composition: Butyl rubber adhesive non-woven polyolefin backing; coated Kraft paper release.
			3. Total Thickness: 25 mil (0.64 mm).
			4. UV Stability: Up to 180 days.
			5. Application Temperature: 30 degree F to 180 degree F (-1 degree C to 82 degree C).
			6. Operating Temperature: -30 degree F to 200 degree F (-34 degree C to 93 degree C).
			7. Packaging: Individually shrink-wrapped.
			8. Roll Weight: 4 inch (102 mm) = 4.6 lb (2 kg)/roll, 6 inches (152 mm) = 6.9 lb (3 kg) /roll, 9 inches (229 mm) = 9.9 lb (4.5 kg)/roll.
			9. Provide Width for Application Required: 4 inches by 100 feet (102 mm by 30.5 m) (2x4 construction), 6 inches by 100 feet (152 mm by 30.5 m) (2x4 construction), 9 inches by 100 feet (229 mm by 30.5) (2x6 construction).

\*\* NOTE TO SPECIFIER \*\* HardieWrap™ Flex Flashing is designed to easily stretch and seal around custom-shaped windows and doors to prevent water intrusion. Progressive adhesion and contains no asphalt, VOCs or solvents.

* + 1. Flexible Flashing:
			1. Product: HardieWrap Flex Flashing as manufactured by James Hardie Building Systems.
			2. Composition: Butyl rubber adhesive; creped cross-laminated polyolefin backing; polyethylene film release.
			3. Total Thickness: 60 mil (1.5 mm).
			4. Tensile Strength (ASTM D3759): 18 lb/inch (3.2kg/cm).
			5. UV Stability: Up to 180 days.
			6. Water Vapor Transfer Rate (ASTM E96-94): <.2g/100 square inches/24hrs.
			7. Application Temperature: 30 degree F to 180 degree F (-1 degree C to 82 degree C).
			8. Operating Temperature: -30 degree F to 200 degree F (-34 degree C to 93 degree C).
			9. Packaging: Each roll is packed in a convenient dispenser box
			10. Roll Weight: 6 inches (152 mm) = 22.2 lb (10kg)/roll, 9 inches (229 mm) = 33.3 lb (15 kg)/roll.
			11. Provide Width for Application Required: 6 inches by 75 feet (152 mm by 23.9 m) (2x4 construction), 9 inches by 75 feet (229 mm by 23.9) (2x6 construction).

\*\* NOTE TO SPECIFIER \*\* HardieWrap™ Seam Tape is designed to seal vertical and horizontal seams and small holes in the weather barrier. Adheres to most surfaces and contains no asphalt, VOCs or solvents.

* + 1. Seam Tape:
			1. HardieWrap Seam Tape as manufactured by James Hardie Building Systems.
			2. Composition: Polypropylene film coated with acrylic adhesive Total Thickness: 3.0 mil (.08 mm).
			3. Adhesion Peel to HardieWrap (PSTC-1): 22 oz/inch (25 N/100 mm).
			4. Tensile Strength (ASTM D3759): 32 lb/in (.58 kg/mm).
			5. Elongation: 136 percent.
			6. UV Stability: Up to 90 days.
			7. Application Temperature: 30 degree F to 180 degree F (-1 degree C to 82 degree C).
			8. Operating Temperature: -30 degree F to 200 degree F (-34 degree C to 93 degree C).
			9. Packaging: Individually shrink-wrapped.
			10. Roll Weight: 1 lb(0.5 kg)/roll.
			11. Roll Size: 1-7/8 inches (43 mm) by 165 feet (50 m).
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until substrates have been properly prepared.
		2. If framing preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
	2. PREPARATION
		1. Clean surfaces thoroughly prior to installation.
		2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
		3. Weather barrier shall be installed before window and door installation. Do not install on saturated sheathing. Weather barrier can become slippery and should not be used in any application where it may be walked on.
		4. Weather barrier shall be installed on vertical wall applications only.
		5. Manufacturer warrants weather barrier sheet only when covered within 180 days of its installation.
	3. INSTALLATION

\*\* NOTE TO SPECIFIER \*\* The installation guidelines herein are only informational in nature and may not be appropriate for use in all applications. It is the sole responsibility of the architect or specifier to identify moisture related risks associated with any particular building design, and to make any appropriate adjustments or modifications to the installation guidelines herein. Wall construction design must effectively manage moisture, considering both the interior and exterior environment of the building, particularly in buildings that have a higher risk of wind driven rain penetration and conditioned spaces. HardieWrap™ weather barrier may be installed on vertical wall applications only. James Hardie requires that HardieWrap™ weather barrier be covered within 180 days of its installation. Wall openings, penetrations, junctions, connections, window sills, headers & jambs must incorporate appropriately installed HardieWrap™ Flashing and HardieWrap™ Flex Flashing or other flashing or flashing details as recommended by the architect or specifier.

* + 1. Moisture Air Barrier Sheet:
			1. Weather barrier shall be installed before window and door installation. Do not install on saturated sheathing. Weather barrier can become slippery and should not be used in any application where it may be walked on.
			2. Begin by affixing weather barrier extending at least 6 inches (152 mm) around a building corner. Unroll horizontally (with print side facing out) around the building covering rough window and door openings.
			3. Fasten to studs or nailable sheathing material with galvanized construction grade staples a maximum of 18 inches (457 mm) in the vertical and horizontal direction.
			4. Attach weather barrier so that it is taut and flat. The vertical overlap shall have a minimum of 6 inches (152 mm) and the vertical seam shall be taped.
			5. Assure that the bottom edge of the weather barrier extends over the sill plate and foundation interface by at least 1 inch (25 mm).
			6. Overlap upper layers of weather barrier (in shingle lap fashion) by a minimum of 6 inches below the horizontal edge, and tape the horizontal seam line.
			7. At roof to wall intersection (or wall to deck), affix wrap to the wall such that it overlaps any step flashing already in place on the wall by at least 2 inches (51 mm).

\*\* NOTE TO SPECIFIER \*\* Flashing is typically utilized at windows, doors, junctions and penetrations; and must be installed in conjunction with HardieWrap™ weather barrier. Check your local Building Code for construction requirements and follow the manufacturer's recommended installation instructions; or utilize standard practices for the installation of exterior windows and doors as referenced in ASTM E2112-01 or AAMA 2400-2 (CAWM 400-95). For specific flashing details and options reference James Hardie's HardieWrap Flashing Guide.

* + 1. Flexible Flashing:
			1. Windows and Doors: Weather barrier is not designed nor guaranteed as a flashing material to prevent moisture or air from intruding behind weather barrier. Verify that flashing has previously been installed around all windows and door openings. Install flexible flashing per manufacturer's instructions.
				1. Use the inverted "Y" cut method at rough window and door openings. Do not place fasteners within 9 inches (229 mm) of the rough opening, door or window heads. This area shall not be fastened to allow for proper head flashing installation. At the top corners of the rough opening, cut the weather barrier at 45 degree to extend 9 inches (229 mm) past the joint.
				2. Fold the top flap up and out of the way and fasten temporarily.
				3. Fold the remaining three flaps in through the opening fastening them inside the opening with staples.
			2. Rough Electrical and Plumbing Penetrations: Seal with a double layer of flashing. Install the top flashing piece over the bottom flashing piece overlapping flashing layers to cover flashing cut-out necessary for placement around penetration.
		2. Repairs: For minor punctures or tears, less than 3 inches (76 mm), cover and completely seal with seam tape. For larger holes, greater than 3 inches (76 mm), use slit flashing technique.
			- 1. Slit flashing requires making a horizontal slit above the damaged area and placing a cut piece of weather barrier into the slit, covering the damaged area. Tape the perimeter of the patched area.
	1. PROTECTION
		1. Protect installed products until completion of project.
		2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION