SECTION 07 25 00

WEATHER BARRIERS

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\*\* NOTE TO SPECIFIER \*\* Alpha ProTech Engineered Products, Inc.; Underlayments and housewraps.
This section is based on the products of Alpha ProTech Engineered Products, Inc., which is located at:
301 S. Blanchard St.
Valdosta, GA 31601
Toll Free Tel: 866-312-1837
Tel: 229-242-1931
Email: [request info (bhayden@alphaprotech.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=Alpha+ProTech+Engineered+Products,+Inc.&coid=51802&rep=&fax=&message=RE:%20Spec%20Question%20(07250apt):%20%20&mf=)
Web: <http://www.alphaprotech.com/catalog/buildingproducts.aspx>
 [ [Click Here](http://www.arcat.com/arcatcos/cos51/arc51802.html) ] for additional information.
Knowledgeable and innovative builders and roofers use our housewrap, synthetic roof underlayment and seaming tape.

1. GENERAL
	1. SECTION INCLUDES

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

* + 1. Weather barriers.
		2. Seaming tape.
	1. RELATED SECTIONS

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

* + 1. Section 03 30 00 - Cast-in-Place Concrete0 - Cast-in-Place Concrete.
		2. Section 04 21 13 - Brick Masonry.
		3. Section 04 22 00 - Concrete Unit Masonry.
		4. Section 04 40 00 - Stone Assemblies.
		5. Section 04 70 00 - Manufactured Masonry.
		6. Section 04 40 00 - Stone Assemblies.
		7. Section 05 40 00 - Cold-Formed Metal Framing.
		8. Section 06 10 00 - Rough Carpentry.
		9. Section 06 15 00 - Wood Decking
		10. Section 06 16 36 - Wood Panel Product Sheathing
		11. Section 07 21 19 - Foamed-In-Place Insulation.
		12. Section 07 24 00 - Exterior Insulation and Finish Systems.
		13. Section 07 60 00 - Flashing and Sheet Metal.
		14. Section 07 65 00 - Flexible Flashing
		15. Section 07 91 23 - Backer Rods.
		16. Section - 6 - Gypsum Board Assemblies.
	1. REFERENCES

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

* + 1. ASTM International (ASTM):
			1. ASTM D882 - Standard Test Method for Tensile Properties of Thin Plastic Sheeting.
			2. ASTM D1117 - Standard Guide for Evaluating Nonwoven Fabrics.
			3. ASTM D3776 - Standard Test Methods for Mass Per Unit Area (Weight) of Fabric.
			4. ASTM D5034 - Standard Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test).
			5. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
			6. ASTM E96 - Standard Test Methods for Water Vapor Transmission of Materials.
			7. ASTM E1677 - Standard Specification for Air Barrier (AB) Material or Assemblies for Low-Rise Framed Building Walls.
			8. ASTM E2178 - Standard Test Method for Air Permeance of Building Materials.
			9. ASTM E2273 - Standard Test Method for Determining the Drainage Efficiency of Exterior Insulation and Finish Systems (EIFS) Clad Wall Assemblies.
		2. American Association of Textile Chemists and Colorists (AATCC).
		3. ICC Evalualtion Services (ICC-ES):
			1. ICC-ES AC 235 - Acceptance Criteria - EIFS Clad Drainage Wall Assemblies.
		4. Technical Association of the Pulp and Paper Industry (TAPPI):
			1. TAPPI T-410 - Grammage of paper and paperboard (weight per unit area).
	1. SUBMITTALS
		1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
		2. Product Data:
			1. Manufacturer's data sheets on each product to be used.
			2. Preparation instructions and recommendations.
			3. Storage and handling requirements and recommendations.
			4. Typical installation methods.

\*\* NOTE TO SPECIFIER \*\* Delete if not applicable to product type.

* + 1. Verification Samples: Two representative units of each type, size, pattern and color.
		2. Shop Drawings: Include details of materials, construction and finish. Include relationship with adjacent construction.
	1. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum five years documented experience.
		2. Installer Qualifications: Company specializing in performing Work of this section with minimum two years documented experience with projects of similar scope and complexity.
		3. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.

\*\* NOTE TO SPECIFIER \*\* Include mock-up if the project size or quality warrant the expense. The following is one example of how a mock-up on 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: Construct a mock-up with actual materials in sufficient time for Architect's review and to not delay construction progress. Locate mock-up as acceptable to Architect and provide temporary foundations and support.
			1. Intent of mock-up is to demonstrate quality of workmanship and visual appearance.
			2. If mock-up is not acceptable, rebuild mock-up until satisfactory results are achieved.
			3. Retain mock-up during construction as a standard for comparison with completed work.
			4. Do not alter or remove mock-up until work is completed or removal is authorized.
	1. PRE-INSTALLATION CONFERENCE
		1. Convene a conference approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Contractor and trades involved. Agenda shall include schedule, responsibilities, critical path items and approvals.
	2. DELIVERY, STORAGE, AND HANDLING
		1. Store and handle in strict compliance with manufacturer's written instructions and recommendations.
		2. Protect from damage due to weather, excessive temperature, and construction operations.
	3. PROJECT CONDITIONS
		1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: Alpha ProTech Engineered Products, Inc., which is located at: 301 S. Blanchard St.; Valdosta, GA 31601; Toll Free Tel: 866-312-1837; Tel: 229-242-1931; Email: [request info (bhayden@alphaprotech.com)](http://admin.arcat.com/users.pl?action=UserEmail&company=Alpha+ProTech+Engineered+Products,+Inc.&coid=51802&rep=&fax=&message=RE:%20Spec%20Question%20(07250apt):%20%20&mf=); Web: <http://www.alphaprotech.com/catalog/buildingproducts.aspx>

\*\* 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 substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

\*\* NOTE TO SPECIFIER \*\* With its one-of-a-kind construction, REX Wrap® Fortis with JX ALTA 360 degrees Drainage Technology™ uniquely enables the drainage of water in EVERY direction to protect buildings from the elements exponentially better than a traditional housewrap while decreasing job site material waste, simplifying installation to reduce labor and carrying fewer products.

* 1. WEATHER BARRIERS

\*\* NOTE TO SPECIFIER \*\* Fortis Commercial Wrap Commercial version is made specifically for large format/high rise applications that need to meet the NFPA 285 fire codes. May be used as a component to an EIFS or one-coat stucco system and meet code requirements as an air barrier. No other house wrap product on the market today offers this unique construction of up to 9 and 10 ft (2743 to 3048 mm) wide 360 degree drainage technology. Delete basis of design paragraph if not required.

* + 1. Basis of Design: REX Wrap Fortis Commercial as manufactured by AlphaProTech Engineered Products, Inc.
			1. Consists of layers of nonwoven and woven polyolefins with a nonperforated vapor-permeable polyolefin surface layer.
			2. For demanding applications to protect from severe weather conditions and environments in multi-family dwellings or commercial buildings exceeding 4 stories. Prevents infiltration of air and water while allowing escape of water vapor.
				1. Can drain in every direction; a one of a kind all weather protection layer for commercial construction.
			3. Features:
				1. Micro perforated allowing moisture vapor to escape wall cavity while holding out bulk water intrusion.
				2. Great translucency for easy stud installation.
				3. Excellent tear strength.
				4. Meets or exceeds all applicable building codes.
				5. Custom 2-color printing available at no extra cost; one pallet minimum.
			4. ICC-Evaluation Report Number: ESR-3140.
			5. Air Penetration Resistance:
				1. Per ASTM E2178: 0.0008 cfm per sq ft at 1.57 psf (0.0041 L per sec per sq m at 0.08 kPa).
				2. Per Gurley Hill (TAPPI-T460): Greater than 1800 sec per 39.37 inches (100 cm).
				3. Per ASTM E1677: Type 1.
			6. Water Vapor Transmission:
				1. Per ASTM E96 Method A: 0.052 lbs per sq ft (245 g per sq m) per 24 hrs.

Perms: 35.

* + - * 1. Per ASTM E96 Method B: 0.089 lbs per sq ft (435 g per sq m) per 24 hrs.

Perms: 62.6.

* + - 1. Water Penetration Resistance per AATCC (127 cm): Greater than 300.
			2. Basis Weight per TAPPI T-410: 2.3 oz per sq yd (77.98 grams per sq m).
			3. Thickness per ASTM D3776: 8 mils (0.203 mm).
			4. Breaking Strength:
				1. Per ASTM D882 MD: 30 lbs per in (535.74 kg per m)
				2. Per ASTM D882 CD: 30 lbs per in (535.74 kg per m)
			5. Dry Tensile:
				1. Per 45 ASTM D5034 MD: 45 lbs per in (803.61 kg per m)
				2. Per 45 ASTM D5034 CD: 45 lbs per in (803.61 kg per m)
			6. Tear Resistance' Trapezoid:
				1. Per ASTM D1117 MD: 13.5 lbs (6.12 kg)
				2. Per ASTM D1117 CD: 12.5 lbs (5.67 kg)
			7. Drainage Efficiency:
				1. Per ASTM E2273: Greater than 95 percent.
				2. Per ICC-ES AC 235 Section 4.5: Greater than 95 percent.
			8. Surface Burning Characteristics per ASTM E84:
				1. Flame Spread Index: 15 Class A.
				2. Smoke Develop Index: 45 Class A.
			9. Ultra Violet Light Exposure: 180 days.
			10. Roll Sizes - Rolls per Pallet.

\*\* NOTE TO SPECIFIER \*\* Delete roll size options not required.

* + - * 1. 36 inch x 100 ft (914 x 30480 mm) - 50 rolls.
				2. 36 inch x 150 ft (914 x 45720 mm) - 45 rolls.
				3. 54 inch x 100 ft (1372 x 30480 mm) - 100 rolls.
				4. 54 inch x 150 ft (1372 x 45720 mm) - 90 rolls.
				5. 9 ft x 100 ft (2743 x 30480 mm) - 50 rolls.
				6. 9 ft x 150 ft (2743 x 45720 mm) - 45 rolls.
				7. 9 ft x 195 ft (2743 x 59436 mm) - 40 rolls.
				8. 10 ft x 100 ft (3048 x 30480 mm) - 50 rolls.
				9. 10 ft x 150 ft (3048 x 45720 mm) - 45 rolls.
				10. 10 ft x 195 ft (3048 x 59436 mm) - 40 rolls.

\*\* NOTE TO SPECIFIER \*\* Fortis High-P Wrap High-P, for those climates needing a high perm product.

* + - * 1. May be used as a component to an EIFS or one-coat stucco system and meet code requirements as an air barrier. No other house wrap product on the market today offers this unique construction of up to 9 and 10 ft (2743 to 3048 mm) wide 360 degree drainage technology. Delete basis of design paragraph if not required.
		1. Basis of Design: REX Wrap Fortis High-Pas manufactured by AlphaProTech Engineered Products, Inc.
			1. Consists of layers of nonwoven and woven polyolefins with a nonperforated vapor-permeable polyolefin surface layer.
			2. For demanding applications to protect from severe weather conditions and environments. Prevents infiltration of air and water while allowing escape of water vapor.
				1. Can drain in every direction, no matter the final wall cladding, wood, vinyl, metal, brick, stone, cement sidings, stucco or EFIS.
			3. Features:
				1. Micro perforated allowing moisture vapor to escape wall cavity while holding out bulk water intrusion.
				2. Great translucency for easy stud installation.
				3. Excellent tear strength.
				4. Meets or exceeds all applicable building codes.
				5. Custom 2-color printing available at no extra cost; one pallet minimum.
			4. ICC-Evaluation Report Number: ESR-3140.
			5. Air Penetration Resistance:
				1. Per ASTM E2178: 0.00082 cfm per sq ft at 1.57 psf (0.0042 L per sec per sq m at 0.08 kPa).
				2. Per Gurley Hill (TAPPI-T460): Greater than 2500 sec per 39.37 inches (100 cm).
			6. Water Vapor Transmission:
				1. Per ASTM E96 Method A: 0.079 lbs per sq ft (385 g per sq m) per 24 hrs.

Perms: 55.

* + - * 1. Per ASTM E96 Method B: 0.095 lbs per sq ft (465 g per sq m) per 24 hrs.

Perms: 67.

* + - 1. Water Penetration Resistance per AATCC (127 cm): Greater than 300.
			2. Basis Weight per TAPPI T-410: 2.2 oz per sq yd (74.59 grams per sq m).
			3. Thickness per ASTM D3776: 8 mils (0.203 mm).
			4. Breaking Strength:
				1. Per ASTM D882 MD: 30 lbs per in (535.74 kg per m)
				2. Per ASTM D882 CD: 30 lbs per in (535.74 kg per m)
			5. Dry Tensile:
				1. Per 45 ASTM D5034 MD: 45 lbs per in (803.61 kg per m)
				2. Per 45 ASTM D5034 CD: 45 lbs per in (803.61 kg per m)
			6. Tear Resistance' Trapezoid:
				1. Per ASTM D1117 MD: 13.5 lbs (6.12 kg)
				2. Per ASTM D1117 CD: 12.5 lbs (5.67 kg)
			7. Drainage Efficiency:
				1. Per ASTM E2273: Greater than 95 percent.
				2. Per ICC-ES AC 235 Section 4.5: Greater than 95 percent.
			8. Surface Burning Characteristics per ASTM E84:
				1. Flame Spread Index: 5 Class A.
				2. Smoke Develop Index: 45 Class A.
			9. Ultra Violet Light Exposure: 180 days.
			10. Roll Sizes - Rolls per Pallet.

\*\* NOTE TO SPECIFIER \*\* Delete roll size options not required.

* + - * 1. 36 inch x 100 ft (914 x 30480 mm) - 50 rolls.
				2. 36 inch x 150 ft (914 x 45720 mm) - 45 rolls.
				3. 54 inch x 100 ft (1372 x 30480 mm) - 100 rolls.
				4. 54 inch x 150 ft (1372 x 45720 mm) - 90 rolls.
				5. 9 ft x 100 ft (2743 x 30480 mm) - 50 rolls.
				6. 9 ft x 150 ft (2743 x 45720 mm) - 45 rolls.
				7. 9 ft x 195 ft (2743 x 59436 mm) - 40 rolls.
				8. 10 ft x 100 ft (3048 x 30480 mm) - 50 rolls.
				9. 10 ft x 150 ft (3048 x 45720 mm) - 45 rolls.
				10. 10 ft x 195 ft (3048 x 59436 mm) - 40 rolls.

\*\* NOTE TO SPECIFIER \*\* Fortis Low-P Wrap Low-P, for those climates needing a low perm product.

* + - * 1. May be used as a component to an EIFS or one-coat stucco system and meet code requirements as an air barrier. No other house wrap product on the market today offers this unique construction of up to 9 and 10 ft (2743 to 3048 mm) wide 360 degree drainage technology. Delete basis of design paragraph if not required.
		1. Basis of Design: REX Wrap Fortis Low-P as manufactured by AlphaProTech Engineered Products, Inc.
			1. Consists of layers of nonwoven and woven polyolefins with a nonperforated vapor-permeable polyolefin surface layer.
			2. For demanding applications to protect from severe weather conditions and environments. Prevents the infiltration of air and water while allowing escape of water vapor.
				1. Can drain in every direction, no matter the final wall cladding, wood, vinyl, metal, brick, stone, cement sidings, stucco or EFIS.
			3. Features:
				1. Micro perforated allowing moisture vapor to escape wall cavity while holding out bulk water intrusion.
				2. Great translucency for easy stud installation.
				3. Excellent tear strength.
				4. Meets or exceeds all applicable building codes.
				5. Custom 2-color printing available at no extra cost; one pallet minimum.
			4. ICC-Evaluation Report Number: ESR-3140.
			5. Air Penetration Resistance:
				1. Per ASTM E2178: 0.0013 cfm per sq ft at 1.57 psf (0.0067 L per sec per sq m at 0.08 kPa).
				2. Per Gurley Hill (TAPPI-T460): Greater than 2000 sec per 39.37 inches (100 cm).
			6. Water Vapor Transmission:
				1. Per ASTM E96 Method A: 0.021 lbs per sq ft (105 g per sq m) per 24 hrs.

Perms: 15.

* + - * 1. Per ASTM E96 Method B: 0.015 lbs per sq ft (72 g per sq m) per 24 hrs.

Perms: 10.4.

* + - 1. Water Penetration Resistance per AATCC (127 cm): Greater than 300.
			2. Basis Weight per TAPPI T-410: 2.2 oz per sq yd (74.59 grams per sq m).
			3. Thickness per ASTM D3776: 8 mils (0.203 mm).
			4. Breaking Strength:
				1. Per ASTM D882 MD: 30 lbs per in (535.74 kg per m)
				2. Per ASTM D882 CD: 30 lbs per in (535.74 kg per m)
			5. Dry Tensile:
				1. Per 45 ASTM D5034 MD: 45 lbs per in (803.61 kg per m)
				2. Per 45 ASTM D5034 CD: 45 lbs per in (803.61 kg per m)
			6. Tear Resistance' Trapezoid:
				1. Per ASTM D1117 MD: 13.5 lbs (6.12 kg)
				2. Per ASTM D1117 CD: 12.5 lbs (5.67 kg)
			7. Drainage Efficiency:
				1. Per ASTM E2273: Greater than 95 percent.
				2. Per ICC-ES AC 235 Section 4.5: Greater than 95 percent.
			8. Surface Burning Characteristics per ASTM E84:
				1. Flame Spread Index: 5 Class A.
				2. Smoke Develop Index: 45 Class A.
			9. Ultra Violet Light Exposure: 180 days.
			10. Roll Sizes - Rolls per Pallet.

\*\* NOTE TO SPECIFIER \*\* Delete roll size options not required.

* + - * 1. 36 inch x 100 ft (914 x 30480 mm) - 50 rolls.
				2. 36 inch x 150 ft (914 x 45720 mm) - 45 rolls.
				3. 54 inch x 100 ft (1372 x 30480 mm) - 100 rolls.
				4. 54 inch x 150 ft (1372 x 45720 mm) - 90 rolls.
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				7. 9 ft x 195 ft (2743 x 59436 mm) - 40 rolls.
				8. 10 ft x 100 ft (3048 x 30480 mm) - 50 rolls.
				9. 10 ft x 150 ft (3048 x 45720 mm) - 45 rolls.
				10. 10 ft x 195 ft (3048 x 59436 mm) - 40 rolls.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. SEAMING TAPE
		1. Basis of Design: REX Premium Seam Tape as manufactured by AlphaProTech Engineered Products, Inc.
			1. A high strength PET film designed for toughest conditions with great cold and warm weather applications.
			2. Features:
				1. Formulated with a "quick-tack" adhesive to speed installation.

Excellent initial and long term adhesion.

* + - * 1. Tape Width: 3 inch (76 mm) vs standard 2 inch (51 mm) width; more surface area to cover seams.
				2. Easy quick tear edges; speeds installation.
				3. Excellent chemical and thermal stability
			1. Physical Properties:
				1. Backing: Polyester (PET).
				2. Adhesive Material: High tack acrylic.
				3. Thickness: 3.38 mil (0.0859 mm)
				4. Adhesion; Peel: 60.0 oz per in (0.067 kg per mm)
				5. Tensile Strength: 20 lbs per inch (357.2 kg per m) width
				6. Color: White.
				7. Roll Width: 3 in (76 mm).
				8. Roll Length: 165 Lineal Feet (50292 mm)
				9. Service Temperature: Minus 22 to 148 degrees F (minus 5.5 to 64 degrees C).
				10. Application Temperature: Minus 4 to 105 degrees F (minus 15.5 to 40.5 degrees C).
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until substrates have been properly constructed and prepared.
		2. If substrate preparation is the responsibility of another installer, notify Architect in writing 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. INSTALLATION
		1. Install in accordance with manufacturer's instructions approved submittals and in proper relationship with adjacent construction.
			1. Install over sheathing board, insulation board or directly to framing members.
			2. Align bottom edge of roll with base of wall, approximately 6 inches (152 mm) from a corner, folding several inches of material under itself and fastening securely to a framing member or directly to studs. Be sure installation is horizontal on the vertical wall.
			3. Unroll housewrap with printed side out, wrapping entire building, including door and window openings.
				1. Fastening Housewrap: Plastic cap nails or staples with 1 inch (25 mm) crown.
				2. Fastener Spacing:

Along Studs: A maximum of 16 inches (406 mm) on center.

Along Top and Bottom Sill Plates: 8 inches (203 mm) on center.

* + - * 1. Installation over Nonstructural Sheathing Products and Foam Insulation Boards: Fasteners must penetrate framing members 1/2 inch (13 mm) and spaced as specified.
			1. Window and Door Openings: Cut through housewrap. Use modified "I" pattern. Fold excess material inside rough openings. Fasten securely through layers to a framing member.
			2. For Door Frames and Windows are Already Installed: Trim as close to frames and windows as possible. Tape housewrap edges using REX Premium Seam Tape or equivalent to seal housewrap seams around openings.
				1. To Ensure 10 Year Limited Warranty: Tape seams using only REX Premium Seam Tape. Flash windows and doors using approved flashing approved in in writing from AlphaProTech Engineered Products, Inc.
			3. At End of Roll and Beginning of New Roll: Fold edge of housewrap under itself and attach to structural sheathing or through the nonstructural sheathing to nearest framing member. Overlap seams 6 inches (152 mm) or more unless otherwise specified for a particular application.
			4. Upper layers of housewrap must overlap the lower layers by 2 inches (51 mm).
			5. Vertical and Horizontal Laps: Taped using a standard grade contractor tape or equivalent to provide maximum results.
			6. Final Side Wall Covering: Apply within 6 months of housewrap application.
	1. FIELD QUALITY CONTROL
		1. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.

\*\* NOTE TO SPECIFIER \*\* Include if manufacturer provides field quality control with onsite personnel for instruction or supervision of product installation, application, erection or construction. Delete if not required.

* + 1. Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.
	1. CLEANING AND PROTECTION
		1. Clean products in accordance with the manufacturers recommendations.
		2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION