ROYAL® Building Products
A Westlake Company

SECTION 07 46 35
INSULATED VINYL SIDING

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PART 1 GENERAL

1.1 SECTION INCLUDES

A. Insulated Vinyl siding.

B. Insulated Vinyl Accessories.

1.2 RELATED SECTIONS

A. Section 06 10 00 - Rough Carpentry.

B. Section 07 21 26 - Blown Insulation.

C. Section 07 26 00 - Vapor Retarders.

D. Section 07 60 00 - Flashing and Sheet Metal.

E. Section 07 90 00 - Joint Protection.

1.3 REFERENCES

A. ASTM C 272 - Test Method for Water Absorption of Core Materials for Structural Sandwich Construction.

B. ASTM C 303 - Standard Test Method for Dimensions and Density of Preformed Block and Board-Type Thermal Insulation.

C. ASTM C 578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.

D. ASTM C 1363 - Standard Test Method for Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus

E. ASTM D 635 - Test Method for Rate of Burning and/or Extent and Time of Burning of Self-Supported Plastics in a Horizontal Position.

F. ASTM D 638 - Test Method for Tensile Properties of Plastics.

G. ASTM D 696 - Test Method for Coefficient of Linear Expansion of Plastics.

H. ASTM D 1929 - Test Method for Ignition Properties of Plastics.

I. ASTM D 3679 - Specification for Rigid Poly Vinyl Chloride (PVC) Siding.

J. ASTM D 5206 – Standard Test Method For Windload Resistance of Rigid Plastic Siding.

K. ASTM E 84 - Test Method for Surface Burning Characteristics of Building Materials.

L. ASTM E 96/E 96M - Standard Test Methods for Water Vapor Transmission of Materials

1.4 SUBMITTALS

A. Submit under provisions of Section 01 30 00 - Administrative Requirements.

B. 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.

C. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

D. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Maintain rigorous production quality control standards to ensure that vinyl siding will perform as expected for its intended use. Products meet or exceed the requirements of ICC and VSI and listed by ICC International Code Council and VSI Vinyl Siding Certification Programs

B. Installer Qualifications: Installer with not less than three years documented experience with products specified or who has passed the Vinyl Siding Institute's (VSI) Certified Installer Program.

C. Mock-Up: Provide a mock-up for evaluation of surface installation techniques and workmanship.
1. Finish areas designated by Architect.
2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
3. Reinstall mock-up area as required to produce acceptable work.

D. Regulatory Requirements:
1. International Building Code (IBC) - TER 1301-03 - 2006, 2009 and 2012
2. International Residential Code (IRC) - TER 1301-03 - 2006, 2009 and 2012

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store vinyl siding, soffits and accessories in clean, dry area, out of direct sunlight.

C. Handle material to prevent damage. Do not allow cartons to crease.

1.7 PROJECT CONDITIONS

A. 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 absolute limits.

1.8 WARRANTY

A. Provide manufacturer's limited lifetime warranty.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Royal Building Products - Siding & Trim Board, which is located at: 91 Royal Group Crescent; Woodbridge, ON, Canada L4H 1X9; Toll Free Tel: 800-387-2789; Tel: 905-850-9700 ; Fax: 905-850-9184 ;
Email: (chris.j.johnson@royalbuildingproducts.com); Web:www.royalbuildingproducts.com

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 MATERIALS

A. Polyvinyl Chloride Characteristics:
1. Impact Resistance: > 60 ft-lb (ASTM D 4226
2. Tensile Strength: > 6000 psi (ASTM D 638)
3. Modulus of Elasticity: 365,000 psi (ASTM D 638)
4. Coefficient of Linear Expansion: < 3.5 x 10-5 in./in degrees F (ASTM D 696)
5. Camber: < 1/8 in. (ASTM D 3679)
6. Heat Shrinkage: 0.00 (ASTM D 3679)
7. Surface Distortion: No distortion at 120 degrees F (ASTM D 3679)

B. Fire Resistance Characteristics:
1. Average Time of Burning: < 5 sec. (ASTM D 635)
2. Average Extent of Burning: < 10 mm (ASTM D 635)
3. Flame Spread- PVC: < 25 (ASTM E 84)
4. Smoke Density- PVC: 460 (ASTM E 84)
5. Flame Spread-Foam: < 75 (ASTM E 84)
6. Smoke Density-Foam: 90 (ASTM E 84)
7. Ignition Properties: Self Ignition did not occur. At 797 degrees F sample began to smolder and continued until consumed (ASTM D 1929)

C. Foam Backed Siding:
1. Polystyrene Density: 1.0 lb./cu.ft. minimum (ASTM C 303)
2. System R-Value: Up to 2.7 (ASTM C 1363) (R-Values vary slightly depending upon profile).
3. Water Permeability: 5.0 perm/inch Maximum (ASTM E 96)
4. Water Absorption for Expandable Polystyrene: < 2.75 percent by volume (ASTM C 272)
5. Impact Resistance: < 200 in. x lb. (ASTM D 4226)

2.3 INSULATED VINYL SIDING

A. Haven Double 6 inch Traditional Horizontal Siding:
1. Profile: 6 inch (152 mm) clapboard profile.
2. Interlocking Profile.
3. Panel Projection: 1-1/8 inches (28.5 mm)
4. Panel Height: 12 inches (305 mm).
5. Length:
   a. 12 feet 6 inches (3.81 m).
   b. 16 feet 6 inches (5.03 m).
6. System R-Value with white EPS: 2.2.
7. Sound Performance: STC of 16 and an OITC of 12.
8. TXL Lamination Technology.
9. Wind Resistance: design pressure of minus 65 psf with standard installation.
10. Finish: Woodgrain.

11. Color: As selected by Architect from manufacturer's standard colors.

B. Haven Double 7 inch Horizontal Siding:
1. Profile: 7 inch (179 mm) clapboard profile.
2. Interlocking Profile.
3. Panel Projection: 1-1/8 inches (28.5 mm)
4. Panel Height: 7 inches (179 mm).
5. Length: 12 feet 2 inches (3.71 m).
6. System R-Value with white EPS: 2.4.
7. Sound Performance: STC of 16 and an OITC of 12.
8. TXL Lamination Technology.
9. Wind Resistance: design pressure of minus 44 psf with standard installation.
10. Finish: Woodgrain.
11. Color: As selected by Architect from manufacturer's standard colors.

C. Haven Board and Batten Vertical Siding:
1. Profile: 10 inch (254mm) board and batten profile.
2. Interlocking Profile.
3. Panel Projection: 1-1/8 inches (28.5 mm)
4. Panel Width: 20 inches (508 mm).
5. Length: 10 feet 0 inches (3.05 m).
6. System R-Value with white EPS: 2.1.
7. Sound Performance: STC of 16 and an OITC of 12.
8. TXL Lamination Technology.
9. Wind Resistance: design pressure of minus 42 psf with standard installation.
10. Finish: Woodgrain.
11. Color: As selected by Architect from manufacturer's standard colors.

2.4 ACCESSORIES

A. Standard Siding Accessories: Provide inside corners, outside corners, j-channels, etc as indicated on the Drawing or as required for the project.
1. Color: As selected by Architect from manufacturer's standard colors.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. Confirm that all critical dimensions are as specified on the drawings.

C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Repair substrate flaws or defects before applying siding or trim.

C. Where necessary, fur surfaces to an even plane and free from obstructions before application.

D. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install siding and trim in accordance with the latest edition of the manufacturer's Installation Instructions.

B. Install cellular siding, trim and accessories in accordance with best practice, with all joint members plumb and true.

C. Securely attach siding using methods and materials recommended by siding manufacturer for wind load conditions at project site.

D. Install siding and accessories with all joint members plumb and true.

3.4 FIELD QUALITY CONTROL

A. After installation of siding and trim, check entire surface for obvious flaws or defects.

B. Replace and repair any problem areas.

3.5 CLEANING

A. After application of siding and trim, clean as necessary to remove all fingerprints and soiled areas.

B. Upon completion of siding application, clean entire area, removing all scrap, packaging, and unused materials related to this work.

3.6 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION