

Northern Star Vinyl Siding Specifications

PART 1 – GENERAL

1.01 Scope of Work

- A. Furnish all necessary labor, material and equipment for complete installation of KP Vinyl Siding and related work as shown on drawings or specified herein.

1.02 References

- A. American Society for Testing and Materials (ASTM)

ASTM D256 - Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics

ASTM D618 - Standard Practices for Conditioning Plastics for Testing

ASTM D635 - Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position

ASTM D638 - Standard Test Method for Tensile Properties of Plastics

ASTM D648 - Standard Test Method for Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position

ASTM D696 - Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics Between -30°C and 30°C with a Vitreous Silica Dilatometer

ASTM D790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials

ASTM D1929 - Standard Test Method for Determining Ignition Temperature of Plastics

ASTM D2843 - Standard Test Method for Density of Smoke from the Burning or Decomposition of Plastics

ASTM D3679 - Standard Specification for Rigid Poly-Vinyl Chloride (PVC) Siding

ASTM D4216 - Standard Specification for Rigid Poly-Vinyl Chloride (PVC) and Related PVC and Chlorinated Poly-Vinyl Chloride (CPVC) Building Products Compounds

ASTM D4226 - Standard Test Methods for Impact Resistance of Rigid Poly-Vinyl Chloride (PVC) Building Products

ASTM D5206 - Standard Test Method for Wind-load Resistance of Rigid Plastic Siding

ASTM D6864 - Standard Specification for Color and Appearance Retention of Solid Colored Plastic Siding Products

ASTM D7251 - Standard Specification for Color and Appearance Retention of Variegated Color Plastic Siding Products

ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials

1.03 Submittals

- A. Submit samples of siding design, size and color for approval.
- B. Product data: Manufacturers standard printed product data and installation instruction for specified products.
- C. Selection samples: Submit color chips of manufacturer's full range of colors for Architects selection.
- D. Verification samples: Submit three samples, each 12 inch in length, of each specified vinyl product in the specified color.
- E. Quality assurance submittals: Submit evidence of Code compliance specified in the quality assurance section of this specification.

1.04 Quality Assurance

- A. Manufacturer to certify that vinyl siding as supplied meets or exceeds the conditions specified in section 2.02.
- B. Regulatory compliance:
 - 1. ICC Evaluation Report ESR-1517
 - 2. HUD-FHA Minimum Property Standards
 - 3. Texas Department of Insurance EC-06

- 4. Conforms with UBC Standard 14-2
- 5. Miami-Dade County Product Control Approved
- 6. VSI Certified - Conforms to ASTM D3679
- 7. Florida Building Code 2010 Approved

1.05 Delivery, Storage and Handling

- A. Siding is packed in cardboard cartons identified with stickers bearing the manufacture's name, product name, product code, number of pieces, size, and date of manufacture.
- B. Prior to application, vinyl siding and accessories are to be stored in an area that is clean, dry and out of direct sunlight
- C. Handle material in a manner to prevent damage. Do not allow siding material to crease.

1.06 Warranty

- A. Upon completion provide a written Lifetime, Transferable, Limited Warranty and for Non-Residential a Fifty Year Warranty

PART 2 – PRODUCTS

2.01 Manufacturer

- A. Materials to be supplied by KP Building Products., www.kpbuildingproducts.com
- B. Substitutions not permitted.

2.02 Materials

- A. Vinyl siding shall conform to all of the requirements established in ASTM Specification D3679, developed in cooperation with the industry and published by the American Society for Testing and Materials. Manufacturer shall maintain rigorous production quality control standards to assure that KP Vinyl Siding will perform as expected for its intended use.

- B. **Typical Compound Properties:** Vinyl siding is produced from KP's exclusive Ultra-Vinyl formula: a Poly Vinyl Chloride (PVC) compounds meeting the requirements of ASTM D3679 and ASTM D4216 with the following manufacturing and product specifications.

Test Criteria: Typical Properties

Tensile Strength (ASTM D638) : 7000 psi

Modulus of Elasticity ASTM D638): 400,000 psi

Izod Impact @70 Deg. F (ASTM D 256):

4.20 lb./in. notch

Izod Impact @32 Deg. F (ASTM D 256):

2.40 lb./in. notch

Deflection Temperature with 264 psi load (ASTM D648):

175°F (79.4°C)

- C. **Fire Resistance Properties:**

Average Time of Burning (ASTM D635) : <5 sec

Average Extent of Burning (ASTM D635) : <5 mm

Flame Spread (ASTM E84): <26

Smoke Density Development (ASTM E84): 250

Fuel Contribution (ASTM E-84): 0

Smoke Density (ASTM D2843) : <50%

Ignition Properties (ASTM D1929): Self ignition did not occur. At 842 Deg. F sample began to smolder and continued until consumed.

- D. **Typical Physical Properties:**

Test Criteria: Typical Properties

Warp (ASTM D3679) : <0.125 in

Heat Shrinkage (ASTM D3679) : <1.9%
Impact Resistance (ASTM D4226):
2.36 in./mil (Procedure A, H.25)
Weatherability (ASTM D3679): No surface or structural defects such as peeling, cracking, chipping.
Coefficient of Linear Expansion (ASTM D3679):
3.00 x 10⁻⁵ in/in Deg F / 5.10 x 10⁻⁵ cm/cm Deg C
Gloss (ASTM D3679): plus or minus 5 units
Surface Distortion (ASTM D3679): No distortion at 120°F
Windload Resistance (ASTM D 5206): up to 60.4 psf

E. Siding Dimensions and Description: (Select Profile)

Northern Star Double 4 Dutch Lap: Double 4 Dutch Lap profile with Double thick .88 Cyclone System Nailing Hem, horizontal siding panel, 8 in. wide exposure configured as two 4 in. panels, 12ft-6in. length.

Northern Star Double 4 Clapboard Lap: Double 4" Lap profile with Double thick .88 Cyclone System Nailing Hem, horizontal siding panel, 8 in. wide exposure configured as two 4 in. panels, 12ft 6 in length

Northern Star Double 5" Dutch Lap: Double 5" Dutch Lap profile with Double thick .88 Cyclone System Nailing Hem, horizontal siding panel, 10 in. wide exposure configured as two 5 in. panels, 12ft. length.

Northern Star Double 5" Clapboard: Double 5" Dutch Lap profile with Double thick .88 Cyclone System Nailing Hem, horizontal siding panel, 10 in. wide exposure configured as two 5 in. panels, 12ft. length.

Northern Star Triple 3" Clapboard: Triple 3" Lap profile with Double thick .88 Cyclone System Nailing Hem, horizontal siding panel, 9 in. wide exposure configured as three 3 in. panels, 12ft. 1 in. length.

Northern Star 6.5" Beaded: Single 6.5" Lap profile with brushed finish and bead. Double thick .88 Cyclone System Nailing Hem, horizontal siding panel, 6.5 in. wide exposure, 12ft. 3 in. length.

F. Siding Panel Description:

Thickness: (0.044 in. ±0.002 in.) with .088 Nailing Hem
Embossing/Woodgrain: Siding panel to match the sample provided under section 1.03.

Color: Siding color shall be present throughout the thickness of the panel. Panels shall be produced using KP's exclusive Ultra-Vinyl formulation. Siding color shall be as specified by architect.

Interlock: Siding panels are made with post form style lock with positive interlock. Both ends of the panel are factory cut and notched for overlap.

Nail Slots: Elongated nail slots 1" long are spaced approximately 1/2" apart in the nailing hem to allow siding to expand and contract properly.

Weep Holes: Small holes under the bottom butt prevent vapor build up and allow accumulated moisture to escape.

2.01 Accessories:

- A. Accessories shall be consistent with the shape, size and properties as shown in the drawing and as required for complete installation. Color shall be matched or color coordinated to the siding according to the architect's specifications.

Accessories shall be produced from the same compound materials and with comparable properties as the siding.

2.02 Fasteners:

- A. Galvanized nails or other corrosion-resistant fasteners, as recommended by manufacturer for specific application shall be used to install the siding.

PART 3 – EXECUTION

3.01 Examination

- A. Confirm that all critical dimensions are as specified in the drawings.
- B. Commencement of siding installation implies acceptance of the substrate as suitable to accept siding.

3.02 Preparation

- A. Any substrate flaws or defects must be repaired, and free from obstructions before the vinyl siding is applied.

3.03 Installation

- A. Solid sheathing and a weather resistive barrier shall be provided behind the siding, as required by the applicable code.
- B. Siding is installed with nails driven into furring strips or wall studs spaced not more than 16 in. on center. The siding fasteners are corrosion resistant nails with a minimum 11/32 in. diameter head and a 0.135 diameter shank.
- C. Nails shall be long enough to penetrate the nailing base by at least 7/8 in.
- D. Install in accordance with the latest edition of the "Vinyl Siding Installation Manual" published by the Vinyl Siding Institute.
- E. The vinyl siding and accessories shall be installed in accordance with the best practice. Nails shall be centered in the siding nail slots with a minimum 1/16 in. clearance between the back of the nail head and the face of the siding. Nails shall be driven perpendicular to the substrate.
- F. At all openings and stops, a minimum gap 1/4 in., shall be provided for expansion and contraction. Joints between panels shall be overlapped a minimum of 1 in., with all joint members plumb and true.

3.04 Field Quality Control

- A. After installation of siding check entire surface for obvious flaws or defects. Replace and repair any problem areas.

3.05 Cleaning

- A. After the vinyl siding has been applied, clean as necessary to remove all fingerprints and soiled areas.
- B. Clean and remove all scrap, packaging and unused materials resulting from the installation of vinyl products.

All KP Vinyl Sidings and accessories are backed by a Lifetime Limited Warranty.

