



# Vinyl Soffit Specifications

## PART 1 – GENERAL

### 1.01 Scope of Work

- A. Furnish all necessary labor, material and equipment for complete installation of Kaycan Vinyl Soffit 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 D4477 - Standard Specification for Rigid (Unplasticized) Poly-Vinyl Chloride (PVC) Soffit
  - 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 soffit 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 soffit as supplied meets or exceeds the conditions specified in section 2.02.

- B. Regulatory compliance:
  1. Conforms to ASTM D4477
  2. Florida Building Code approval (FBC) 2020
  3. Miami-Dade County approved

### 1.05 Delivery, Storage and Handling

- A. Soffit 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 soffit 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 Kaycan Ltd., [www.kaycan.com](http://www.kaycan.com)
- B. Substitutions not permitted.

### 2.02 Materials

- A. Vinyl soffit shall conform to all of the requirements established in ASTM Specification D3679 and ASTM D4477, 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 Kaycan Vinyl Soffit will perform as expected for its intended use.

- B. **Typical Compound Properties:** Vinyl soffit is produced from Kaycan's exclusive Duratron formula: a Poly Vinyl Chloride (PVC) compounds meeting the requirements of ASTM D3679, ASTM D4477 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° F (ASTM D 256): 4.20 lb./in. notch

Izod Impact @32° 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 Index (ASTM E84): 20

Smoke Developed Index (ASTM E84): 250

Fuel Contribution (ASTM E-84): 0

Smoke Density (ASTM D2843) : <50%

Ignition Properties (ASTM D1929): Self ignition did not occur.

At 824° F sample began to smolder and continued until consumed.

- D. **Typical Physical Properties:**

Test Criteria: Typical Properties

Impact Resistance (ASTM D4226):

2.36 in./mil (Procedure A, H.25)



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Weatherability (ASTM D3679): No surface or structural defects such as peeling, cracking, chipping.

Coefficient of Linear Expansion (ASTM D3679):

$3.00 \times 10^{-5}$  in/in  $^{\circ}$ F /  $5.10 \times 10^{-5}$  cm/cm  $^{\circ}$ C

Gloss (ASTM D3679): plus or minus 8 units

Windload Resistance (ASTM D 5206) 10" Soffit:

Wind speed up to 139 mph

Design Pressure up to -46.7 psf

Windload Resistance (ASTM D 5206) 12" Soffit:

Wind speed up to 166 mph

Design Pressure up to -66.7 psf

## E. Siding Dimensions and Description: (Select Profile)

**10" Solid Soffit:** Double profile with Single Nail Hem, 10" wide exposure configured as two 5" panels, thickness  $0.042" \pm 0.001"$ , 12ft length.

**10" Vented Soffit:** Perforated Double profile with Single Nail Hem, 10" wide exposure configured as two 5" panels, thickness  $0.042" \pm 0.001"$ , 12ft length. Free air space:  $4.5 \text{ in}^2/\text{ft}^2$ .

**12" Solid Soffit:** Triple 4" profile with Single Nail Hem, 12in. wide exposure configured as three 4" panels, thickness  $0.039" \pm 0.001"$ , 12ft length.

**12" C-Vent Soffit:** Center Vented Triple 4" profile with Single Nail Hem, 12in. wide exposure configured as three 4" panel, thickness  $0.039" \pm 0.001"$ , 12ft length. Free air space:  $2.18 \text{ in}^2/\text{ft}^2$ .

**12" O-Vent Soffit:** Vented Triple 4" profile with Single Nail Hem, 12in. wide exposure configured as three 4" panels, thickness  $0.039" \pm 0.001"$ , 12ft length. Free air space:  $4.18 \text{ in}^2/\text{ft}^2$ .

## F. Soffit Panel Description:

Embossing/Woodgrain: Soffit panel to match the sample provided under section 1.03.

Color: Soffit color shall be as specified by architect.

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

## 2.03 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 soffit according the architect's specifications.

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

## 2.04 Fasteners:

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

## PART 3 – EXECUTION

### 3.01 Examination

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

### 3.02 Preparation

- A. Any substrate flaws or defects must be repaired and free from obstructions before the soffit 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 soffit check entire surface for obvious flaws or defects. Replace and repair any problem areas.

### 3.05 Cleaning

- A. After the vinyl soffit 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 Kaycan Vinyl products are backed by a Lifetime Limited Warranty.