

# GUIDE SPECIFICATION

## CERACLAD™ Rain Screen Fiber Cement Siding System

Specifier Note: The purpose of this guide specification is to assist the specifier in correctly specifying high-performance Rain Screen Fiber Cement Siding. The specifier needs to edit these guide specifications to fit the needs of each specific project.

KMEW or its representatives are not licensed architecture or engineering professionals and do not represent that any of the information provided herein is being provided by a licensed architect or engineering professional.

Areas specifically highlighted in **yellow** indicate selections that must be made between two or more choices during the specification process.

SECTION 074646 – FIBER CEMENT SIDING

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, when applicable, apply to this Section.

1.02 SUMMARY

- A. Section includes;
1. Factory-finished fiber cement siding finished with [ceramic] [CREATIV™] coating.
  2. ZAM® coated panel clip system.
  3. Galvanized steel Starter Bar.
  4. ZAM® coated Metal Caulking Joiner with bond breaker tape.
  5. Stainless Steel Fasteners.
  6. Low Modulus Sealant.
  7. Touch-up paint.
- B. Demolition debris and construction waste disposal is Contractors responsibility. Comply with applicable Federal, State and Local Regulations.
- C. Related Requirements:
1. Section 060000 – Wood, Plastics, and Composites
  2. Section 072000 – Thermal Protection
  3. Section 079000 – Joint Protection

1.03 REFERENCES

- A. Referenced Standards: These Standards and Reports form part of this specification only to the extent they are referenced as specification requirements.
1. ASTM C 1186 – Standard Specification for Flat Fiber Cement Sheets.
  2. ICC Evaluation Services Inc. Evaluation Report ESR-1627.
  3. Canadian Construction Material Centre CCMC-13084-R.
  4. ASTM E 136 – Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C.
  5. PS 1 – Construction and Industrial Plywood.

1.04 SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples for Verification: For the following products:
1. Fiber Cement Siding Panel in color selected by Architect.
  2. Manufacturer Warranty Card.
  3. Product Test Reports: For Fiber Cement Siding, tests performed by manufacturer and witnessed by a qualified testing agency.
  4. Research / Evaluation Reports: For components of cladding system from ICC-ES.

5. Maintenance Data: For cladding system to include maintenance requirements.

1.05 QUALITY ASSURANCE

- A. Product Performance Requirements: Fiber Cement Siding panels shall meet the typical properties:
  1. Thickness 16 mm +/- 0.6 mm
  2. Length: 3030 mm +/- 1.0 mm.
  3. Width: 455 mm +/- 0.5 mm.
- B. Mock-up: At Owner's expense, provide a complete system sample of specified size using workmen, equipment and techniques proposed for use on the project. The completed mock-up shall become the standard of comparison for finished work for the project.
- C. Workmanship shall be adequate quality to meet project specifications as determined by Owner.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver manufactured materials in original unopened packages or containers, with manufacturer's labels intact and legible.
- B. Protect materials from damage.
- C. Store siding panels horizontally and under cover. Keep siding panels dry and off the ground prior to installation to avoid moisture conditions that could affect the quality of work. Siding panels are not to be stacked more than 2 pallets high.
- D. Carry panels at mid span and on edge for ease of handling and to avoid breakage.
- E. Siding panels contain silica. When drilling, cutting, or abrading siding panels during installation or handling, observe the following precautions:
  1. Work outdoors when feasible or in well ventilated indoor space.
  2. Wear a dust mask or use a respirator.
  3. Warn other workers and building occupants in the area.
  4. Advise building occupants to close windows in the immediate area of work.

1.07 FIELD CONDITIONS

- A. Solid core fiber cement panels are not to be installed in regions averaging more than 80 freeze thaw cycles per year. Hollow core fiber cement panels do not have this restriction. Contact the manufacturer for more information.

1.08 WARRANTY

- A. Product Performance: 50 YEAR LIMITED WARRANTY – The Product shall not incur structural cracking, rot or delaminate under normal use and wear and shall resist damage caused by termites for a period of 50 years under normal use.
- B. Ceramic Coating: 20 YEAR LIMITED WARRANTY – The Ceramic Product finish shall retain its color and luster and shall not significantly peel, incur structural cracking or chip for a period of 20 years under normal use.

PROJECT NAME  
OWNER NAME  
PROJECT LOCATION

PROJECT NO.  
REVISION  
PHASE OR DATE

1. Color fade shall not exceed color No. 1-2 and E=9.6 in accordance with ISO 105-A02:1990 – Test for color fastness, Part A02: Grey scale for assessing change in color for color integrity.
- C. CREATIV™ Product finish: 15 YEAR LIMITED WARRANTY – The CREATIV™ Product finish shall not significantly peel, incur structural cracking or chip for a period 15 years under normal use.
- D. See Warranty Card for full product warranty details.

## PART 2 – PRODUCTS

### 2.01 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  1. Basis of Design: KMEW USA Inc., 15359 NE 90<sup>th</sup> Street, Redmond WA 98052, <http://www.ceraclad.com/>.
  2. Primary Contact: Barry Meyer (847) 452-2221. ARCSPEC [Barry@arcspec.us](mailto:Barry@arcspec.us)
  3. Secondary Contact: Ron Loyd, CDT. (425) 553-5780. [Ron.Loyd@Ceraclad.com](mailto:Ron.Loyd@Ceraclad.com)
- B. Substitutions: Not Permitted.

### 2.02 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed Fiber Cement Siding shall withstand exposure to weather and normal use without failure due to defective manufacture.
  1. Combustion Characteristics: Fiber cement siding shall be classified noncombustible according to ASTM E 136 – Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 Degrees Celsius.
  2. Flame Spread Characteristics: Fiber cement siding shall be classified “A” according to ASTM E84 – Standard Test Method for Surface Burning Characteristics.
    - a. Flame Spread: 0
    - b. Smoke Developed: 0
  3. Wind Loaded Strength Characteristics: Fiber cement siding system shall resist wind load pressures in accordance with testing conducted per ASTM E 72 – Strength Tests of Panels for Building Construction.
  4. Ignition Characteristics: Fiber cement siding system shall not ignite when tested according to NFPA 268 – Standard Test Method for Determining Ignitability of Exterior Wall Assemblies Using a Radiant Heat Energy Source.
  5. Weathering and Color Fastness: Fiber cement siding system color fade shall not exceed color No. 1- 2 and E= 9.6 in accordance with ISO 105-A02:1990, Test for Color Fastness- Part A02; Grey scale for assessing change in color.

2.03 FIBER CEMENT SIDING MATERIAL

- A. Blend of Portland Cement, Wood Fiber and Lightweight Materials and Recycled Materials including Fly Ash, extruded into panels and pre-finished for installation in a Rain-Screen Exterior siding system suitable for new construction and renovation applications.
- B. Profile: [Cast Stripe] [Cast Stripe CREATIV™] [Contemporary Smooth] [Contemporary Smooth CREATIV™] [8 Reveal] [Rustic Wood] [Textured Stucco] [Zen Garden]; CERACLAD™ by KMEW.
- C. Color: [To be selected by Architect from Manufacturer's standard color selection by profile.] [To be selected from Manufacturer's CREATIV™ Color Swatch.]
- D. Recycled Content: Minimum 44%
- E. VOC: Zero Emissions.

2.04 AUXILIARY INSTALLATION MATERIALS

- A. General: Auxiliary installations materials recommended by fiber cement siding manufacturer for intended use and compatible with Rain Screen Exterior Siding System.
- B. Starter Bar: CERACLAD™ Galvanized [Horizontal] [Vertical] Starter Bar by KMEW.
- C. Panel Clip: CERACLAD™ ZAM® coated Panel Clip by KMEW.
- D. Corner Clip: CERACLAD™ ZAM® coated Corner Clip by KMEW.
- E. Corner Siding: CERACLAD™ [18"] [10"] Corner Siding by KMEW.
- F. Metal Caulking Joiner: CERACLAD™ ZAM® coated [Horizontal] [Vertical] Metal Caulking Joiner by KMEW.
- H. Cut Edge Sealer: Concrete Sealer, locally purchased.
- I. Caulk: Low Modulus Silicone Joint Sealant in matching color.
  - 1. Ultra Low Modulus Sealant, 790 Silicone Building Sealant by Dow Corning.
  - 2. Low Modulus Silicone Join Sealant, Spectrem 1 by Tremco.
- J. Touch-up Paint Kit: CERACLAD™ 3 part kit consisting of 1 bottle primer, 1 bottle acrylic color base and 1 bottle hardener by KMEW.

2.05 SOURCE QUALITY CONTROL

- A. Single Source Responsibility: Supply panels and accessories as manufactured, distributed or approved for use by KMEW. No substitutions allowed.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify conditions ready to receive work of this Section. Do not begin work until correction of unsatisfactory conditions.

- B. Examine substrate to ensure that finished surfaces will be true, level, and plumb without requiring additional steps. Notify proper authority in writing of discrepancies found in the substrate. Beginning of installation indicates acceptance of existing conditions.

### 3.02 PREPARATION

#### A. Substrate:

1. Provide work to make corrections to substrate conditions suitable for installation, and able to withstand normal construction and live loads.
2. Substrate Flatness: 1/16 inch within every 32 inch span.
3. Report and document defects and do not proceed until defects are corrected.
4. Do not install directly to stucco, brick, concrete masonry, tile or similar substrates. Wood battens or Z-girts can be used to provide a suitable substrate for attachment.

#### B. Starter Bar:

1. Mark a level line for starter bar to end up with approximately 1/2" ventilation gap between bottom of siding panels and sill flashing.
2. Fasten starter bar securely along mark with clip screws. Starter bar must fully support first panel
3. Maximum distance between screws must not exceed 16" unless otherwise specified by licensed structural engineer.

### 3.03 INSTALLATION

#### A. General:

1. Install products in accordance with manufacturers most recently published installation guidelines, applicable building codes and other laws, rules, regulations and ordinances.
2. Review all manufacturer installation and maintenance instructions and other applicable documents.
3. CAUTION: Siding panels contain silica. When drilling, cutting, or abrading siding panels during installation or handling. Observe the following precautions:
  - a. Work outdoors when feasible or in a well-ventilated area when indoors.
  - b. Wear a dust mask or use a respirator.
  - c. Warn other workers and building occupants in the area.
  - d. Advise building occupants to close windows in the immediate area of work.

#### B. First Panel Installation:

1. Horizontal Orientation:
  - a. Begin installing the first horizontal siding panel by seating the bottom concealed ship-lapped edge of the panel squarely on the grooved lower lip of the horizontal starter bar. Install panel clips to top ship-lapped edge of panel at least every 16" to secure panel to the wall.

2. Vertical Orientation:

- a. Begin installing first vertical siding panel by working from the left hand inside or outside corner. Seat flat edge of panel on vertical starter bar. Install panel clips to the ship-lapped edge of the panel at least every 16" to secure panel to wall. Always install the first clip as close to the starter bar as possible, and no more than 3" above the starter bar.

C. Subsequent Panel Installation:

1. Fit panels tightly together on both horizontal and vertical joints ensuring that panel edges are properly seated in clips.
2. Continue using panel clips on ship lapped edges of panel as work proceeds along the wall. Correct installation of panels into clips will create desired air cavity which allows for circulation of air. Clip must be attached within 3 inches of any panel end. Fasten clips to studs using one screw per clip. Fasten clips to sheathing using two screws per clip.
3. Install panels working left to right and bottom to top.
4. Apply sealer to field cut edges.
5. Pre-drill panels prior to attaching with face nails or screws.
6. Do not directly fasten any item to panels. Provide blocking behind panel and fasten objects through panels into blocking and building frame. Panels are not structural sheathing.

3.04 MAINTENANCE

- A. Review technical documentation for detailed instructions on care and maintenance of CERACLAD™ fiber cement panels.

3.05 CLEANING

- A. Wipe off dirt with a cloth dampened with diluted neutral mild detergent. Do not use a solvent, such as thinner, or scrub panels with steel wool pad as this will damage the surface. Do not use a steam cleaner or power washer, which can also damage the surface of the panels.
- B. If nailed or screwed sections become cracked, replace with new panels. Alternatively, minor surface cracks may be repaired with putty. Contact your local CERACLAD™ representative.

END OF SECTION