SECTION 07 44 56
MINERAL-FIBER-REINFORCED CEMENTITIOUS PANELS

1.GENERAL

1.1. SECTION INCLUDES

1.1.1. Fiber cement panels of the following types:
1.1.1.1. Through color high density fibre cement panels: KØL

1.1.2. Cladding attachment system.

1.2. RELATED SECTIONS

1.2.1. Section 05 40 00 - Cold-Formed Metal Framing.

1.2.2. Section 06 01 10 - Rough Carpentry.

1.2.3. Section 07 21 26 - Blown Insulation.

1.2.4. Section 07 27 00 - Air Barriers.

1.3. REFERENCES

1.3.1. CEN - European Committee for Standardization:
1.3.1.1. EN 12467 - Fiber Cement Flat Sheets-Product Specifications and Test Methods.
1.3.1.2. EN 13501 - Fire Test to Building Material.
1.3.1.3. EN 20105 - Test for Color Fastness.
1.3.1.3.1. Part A02 Grey Scale.

1.3.2. ASTM - ASTM International:
1.3.2.1. ASTM E 84 - Surface Burning Characteristics of Building Materials.
1.3.2.2. ASTM E136 - Standard Test Method for Behaviour of Materials in a Vertical Tube Furnace at 750-degree C. Determination of Non-Combustibility.

1.3.3. ULC - National Standard of Canada.
1.3.3.1. CAN/ULC S114 - Standard Method of Test for Determination of Non-Combustibility in Building Materials.

1.4. SUBMITTALS

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

1.4.2. Product Data: Manufacturer's data sheets on each product to be used, including:
1.4.2.1. Preparation instructions and recommendations.
1.4.2.2. Storage and handling requirements and recommendations.
1.4.2.3. Installation methods.

1.4.3. Shop Drawings: Provide detailed drawings of non-standard applications of fibre cement materials which are outside the scope of the standard details and specifications provided by the manufacturer.

1.4.4. Attachment System Engineered Drawings:
1.4.4.1. Provide engineered design for attachment and back-up framing to support exterior cladding.
1.4.4.2. Provide static calculations verifying sizing of members, attachment devices and

fasteners to support the exterior cladding with a safety factor required by Authority Having Jurisdiction (AHJ).

1.4.4.3. Provide Installation drawings and details.

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

1.4.6. 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

1.5.1. Installer Qualifications: Minimum of 2 years experience with installation of similar products.

1.5.2. Color Evaluation: Insignificant change after 3000 hours of QUV test (EN 20105).

1.5.3. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.

1.5.3.1. Finish areas designated by Architect.

1.5.3.2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.

1.5.3.3. Remodel mock-up area as required to produce acceptable work.

1.6. FABRICATION, DELIVERY, STORAGE, AND HANDLING

1.6.1. Installation in accordance with manufacturer's recommended guidelines.

1.7. PROJECT CONDITIONS

1.7.1. 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.

1.8. WARRANTY

1.8.1. Warranty: Manufacturer warrants that its products are manufactured in accordance with its applicable material specifications and are free from defects in materials and workmanship.

1.8.1.1. Only products that are installed and used in accordance with applicable manufacturer's instructions and specifications are warranted.

1.8.1.2. The warranty is applicable only to claims made in writing and received by the manufacturer within thirty days after the defect was discovered and within ten years after the date of the shipment of the product by the manufacturer.

2.PRODUCTS

2.1. MANUFACTURER/SUPPLIER

2.1.1. Basis of Design: KØL High-Density Fibre Cement Email: info@kolfacade.com, www.kolfacade.com

2.1.2. Substitutions: Not permitted.

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

2.2. THROUGH COLOUR HIGH DENSITY FIBRE CEMENT PANELS

2.2.1. Through Color High Density Fiber Cement Panels:

2.2.1.1. Product: KØL High-Density Fibre Cement

2.2.1.1.1. Application: Exterior.

2.2.1.1.2. Application: Interior.
2.2.1.1.3. Thickness: 5/16 inch (8 mm).
2.2.1.1.4. Finish: Through-coloured, muted, matte finish with a unique weather-proof treatment which makes it resistant to staining and surface dirt.
2.2.1.1.5. Color: 9010 Pure White
2.2.1.1.6. Color: 9002 Natural
2.2.1.1.7. Color: 7038 Telegrey
2.2.1.1.8. Color: 7037 Zinc
2.2.1.1.9. Color: 7015 Slate
2.2.1.1.10. Color: 9010 Desert

2.2.1.1.11. Fire Testing:
2.2.1.1.11.1. CAN/ULC S114
2.2.1.1.11.2. ASTM E136
2.2.1.1.11.3. EN 13501

2.3. MISCELLANEOUS CLADDING MATERIALS

2.3.1. Weather Resistive Barrier: VaproShield RevealShield IT

2.4. ATTACHMENT SYSTEMS

2.4.1. Attachment System, Steel Supporting Members:
2.4.1.1. Product: "Hat" or "Z" profiles supplied by others.
2.4.1.1.1. Material: Steel, minimum 18-gauge, minimum G90 coating.
2.4.1.2. UV Protective Membrane: VaproShield RevealShield IT
2.4.1.2.1. For open joint ventilated rain screen systems.

2.4.2. Attachment System, Aluminum Supporting Members:
2.4.2.1. Product: "Hat" or "Z" profiles supplied by others.
2.4.2.1.1. Material: Aluminum - min. 2mm thickness.
2.4.2.2. UV Protective Membrane: VaproShield RevealShield IT
2.4.2.2.1. For open joint ventilated rain screen systems.

2.4.3. Attachment System, Wood Supporting Members:
2.4.3.1. Product: Wood profiles supplied by others.
2.4.3.1.1. Material: Pressure treated wood.
2.4.3.2. UV Protective Membrane: VaproShield RevealShield IT
2.4.3.2.1. For open joint ventilated rain screen systems.

3.EXECUTION

3.1. EXAMINATION

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

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

3.2. PREPARATION

3.2.1. Clean surfaces thoroughly prior to installation.

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

3.3. INSTALLATION

3.3.1. Install in accordance with manufacturer's instructions and approved submittals.

3.3.2. For exterior applications, comply with local codes and structural engineer's fastening calculations along with manufacturer's recommendations for fastener spacing.

3.4. EXTERIOR CLADDING FOR RAINSCREEN APPLICATIONS

3.4.1. Detailing Requirements:

3.4.1.1. Air space at top and bottom of building or wall termination shall be 3/4 inch (20 mm) to facilitate airflow from behind the panels. Do not block vertical airflow at windows, doors, eaves, or at the base of the building. Airflow shall be continuous from bottom to top so there is air movement behind each panel. For walls over 60 feet high (18 m), the ventilated cavity between rear of panels and exterior wall shall be increased to 1-5/8 inches (40 mm). Air flow behind the cement fiber panels is critical to the performance of the rain screen constructions.

3.4.1.2. Fasteners in profile shall accommodate thermal expansion/contraction of metal and not interfere with panel application.

3.4.1.3. Install panels from top of building to bottom.

3.4.1.4. For straight walls, start panel installation in centre and work outward.

3.4.1.5. For walls with inside corners, start installation at corner and work across wall.

3.4.1.6. Pattern: Straight pattern with vertical panels. Panel size as indicated.

3.4.1.7. Pattern: Straight pattern with horizontal panels. Panel size as indicated.

3.4.1.8. Pattern: Semi pattern with horizontal panels. Panel size as indicated.

3.4.2. Rain Screen Installation: Comply with manufacturer's installation requirements.

3.4.2.1. Attachment System: Comply with manufacturer's engineered design for cladding support framing.

3.5. PROTECTION

3.5.1. Protect installed products until completion of project.

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

END OF SECTION