



DEKKO [INTERIOR] Cladding Three-Part Specification

04 42 00 [Interior] CONCRETE UNIT MASONRY

Part I – General

1.1 SECTION INCLUDES:

- A. Interior factory manufactured lightweight concrete cladding to complete interior wall and ceiling cladding and architectural features.

1.2 RELATED SECTIONS

- A. Section 04 20 00 – Unit Masonry
- B. Section 04 05 00 – Common Work Results for Masonry
- C. Section 05 41 00 - Structural Metal Stud Framing
- D. Section 06 10 00 - Rough Carpentry
- E. Section 06 16 00 – Sheathing
- F. Section 09 78 00 – Cementitious Wall Finishes

1.3 REFERENCES

- A. ASTM International (ASTM):
 - 1. ASTM E72 - Standard Test Methods of Conducting Strength Tests of Panels for Building Construction
 - 2. ASTM 140 - Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units
 - 3. ASTM E84 - Standard Test for Surface Burning Characteristics of Building Materials.
 - 4. ASTM E136 - Standard Test Method for Assessing the Combustibility of Materials Using a Vertical Tube Furnace at 750 °C.
- B. Standards Council of Canada & Underwriters Laboratories Canada (ULC):
 - 1. CAN/ULC S114 – Standard Method of Test for Determination of Non-Combustibility in Building Materials

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 33 00 - Submittal Procedures.

- B. Product Data: Submit manufacturer's product description, storage and handling requirements, and installation instructions.
- C. Product Test Reports and Code Compliance: Documents demonstrating product compliance with local building code, such as test reports or Evaluation Reports from qualified, independent testing agencies.
- D. LEED Credits:
- E. Manufacturer's Details: Submit drawings (dwg., rvt., pdf formats), including plans, sections, showing installation details that demonstrate product dimensions, edge/termination conditions/treatments, compression and control joints, corners, openings, and penetrations.
- F. Samples: Submit 5 x 5 samples (12 x 12 optional) of each product type proposed for use.

1.5 QUALITY ASSURANCE

- A. Manufacturer's Qualifications:
 - 1. All lightweight concrete panels specified in this section must be supplied by a manufacturer with a minimum of 10 years of experience in fabricating and supplying concrete cladding systems.
 - 2. Provide technical and design support as needed regarding installation requirements and warranty compliance provisions.
- B. Installer Qualifications: Installer shall be experienced in performing work of similar type and scope.
- C. Pre-Installation Meetings: Prior to beginning installation, conduct conference to verify and discuss substrate conditions, manufacturer's installation instructions and warranty requirements, and project requirements.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Panels must be stored on their edge (thickness) and kept dry before installation. Do not allow your crates to be exposed to the elements prior to installation. Doing so may result in water stains, discoloration, and mold. Always store crated panels in a secure, indoor, and climate-controlled location until installation. Do not stack crates. Refer to the information included on each pallet.
- B. If panels are exposed to water or water vapor prior to installation, it may result in panel staining and such action may void warranty.
- C. Panels MUST be carried on edge. Do not carry or lift panels in flat orientation. Improper handling may cause cracking or panel damage.

D. Avoid direct contact between the panels and the ground. It is necessary to keep panels clean during installation process. Where clean gloves while handling.

1.7 PROJECT CONDITIONS

A. Field Measurements:

1. Verify actual measurements/openings by field measurements before material fabrication and show recorded measurements on shop drawings.
2. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

1.8 WARRANTY

A. Provide manufacturer's 5-year warranty against manufactured defects in DEKKO concrete cladding panels.

B. Warranty provides for the original purchaser. See warranty document for detailed information on terms, conditions, and limitations.

PART II: PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer:

1. DEKKO Inc., 1915 Setterington Dr., Kingsville, ON N9Y2E5, Canada
2. Office: 855.422.0077, www.dekkoconcrete.com

B. Basis of Design Product: DEKKO Lightweight Concrete Cladding.

1. Colors: Natural, Ash, Limestone, Sandstone, Clay, Charcoal. Color must be "through-color."
2. Profile: [Flat: standard, inset, raised] [fluted]
3. Dimensions: [Flat, inset, raised: 24" x 48" (645 mm x 1219 mm), 48" x 48" (1291 mm x 1219 mm), 48 x 96 (1291 mm x 2438 mm)] [Fluted: 24" x 60" (645 mm x 1542 mm), 24" x 96" (645 mm x 2438 mm)].
4. Panel Thickness: [Flat: 13 mm (1/2")] [Inset: 19 mm (3/4")] [Raised: 63.5 mm (2.5"), hollow back] [Fluted: 31.75 mm (1.25")]
5. Finish: [standard raw concrete: flat, inset, raised] [smooth concrete: fluted]
6. Panel Edges: Square [Beveled] [1/4" or 1/2" mortar line]
7. Corner Options: [Mitered] [Reveal] [Architectural Reveal] [Seamless]

8. Weight: [Flat: 3.2 lbs./ft² (15.6 kg/m²)] [Inset: 4.8 lbs./ft² (23.4 kg/m²), 2.5 lbs./ft² (12.2 kg/m²) inset portion] [Raised: 3.3 lbs./ft² (16.1 kg/m²)] [Fluted: 4.3 lbs./ft² (21 kg/m²)]

9. Density: 69 lbs./ft³ (1110 kg/m³)

10. Coverage: 16 sq. ft. per 48" x 48" panel & 32 sq. ft. per 48" x 96" panel.

C. Substitutions: Not permitted.

2.2 MATERIALS

A. DEKKO concrete cladding panels to be factory hand made.

B. DEKKO concrete cladding Panel surface raw finish.

2.3 PERFORMANCE REQUIREMENTS:

A. ASTM International (ASTM):

1. ASTM E72 - Standard Test Methods of Conducting Strength Tests of Panels for Building Construction: Applied 3000 PA; Pass; CAT 4

2. ASTM 140 - Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units: Average Compressive Strength: Dry: 26.3 MPa; Wet: 23.7 MPa

3.. ASTM E84 - Standard Test for Surface Burning Characteristics of Building Materials: Flame Spread: 0, Smoke Developed: 5, Class A

6. ASTM E136 - Standard Test Method for Assessing the Combustibility of Materials Using a Vertical Tube Furnace at 750 °C: Pass

B. Standards Council of Canada & Underwriters Laboratories Canada (ULC):

1. CAN/ULC S114 – Standard Method of Test for Determination of Non-Combustibility in Building Materials: Confirmed non-combustible.

2.4 FABRICATION

A. DEKKO concrete cladding panels are fabricated in accordance with manufacturers' standards and approved submittals.

B. Panels shall be fabricated to size including all required factory tolerances.

C. Field-cut panels if required and drill face-fastening anchor holes in accordance with the manufacturer's written instructions.

D. Fabricate all panels to profiles, colors and textures selected by the Architect.

2.5 INSTALLATION COMPONENTS

A. System:

1. Adhesive: High adhesion, Low expansion, foam adhesive provided by DEKKO.
2. Brad Nails: 1-1/2" Long, 16-gage, with small heads, used for delicate trim and molding. Stainless Steel Type 316.
3. Screws: use 1-1/2" Long trim screws (minimum length) or 3-0" depending on application. Stainless Steel, Type 316.

B. Caulk:

1. Fill panel joints, countersunk holes, and screw heads with provided DEKKO color matched sanded caulk. Working with one line at a time, carefully squeeze grout into joints overfilling slightly.
2. Working one seam at a time, carefully squeeze DEKKO color-matched sanded caulking into the panel's joints, overfilling slightly.
3. Use rounded edge of the provided slick or putty knife, hold it almost parallel to the panel and gently put pressure on the slick running it along the entire length of the joint.
4. Use square end of the slick or putty knife to remove excess caulking making the joints flush.
5. After the caulk is dry and panels are completely installed, remove rough edges or dirt spots, by gently sanding with a drywall sponge. If sanding any part of the panels, be sure to vacuum material to reveal the natural texture of the concrete cladding.

PART III: EXECUTION

3.1 MANUFACTURERS' INSTRUCTIONS

A. Compliance: Comply with manufacturers' product data, including technical bulletins, product catalog, piece-marked drawings, and installation instructions for installation.

3.2 EXAMINATION

A. Verification of Conditions:

1. DEKKO concrete cladding panels can be installed over existing, level building substrate which is secure; uneven surfaces may cause panels to crack. Substrate can be concrete block, plywood, brick, etc.
2. Substrate should be a minimum of 1/2" thickness.

B. Examine substrate conditions are within alignment tolerances for proper installation.

C. Do not begin installation until unacceptable conditions have been corrected.

- D. Do not install panels or components that appear to be damaged or defective. Do not install wet panels.

3.3 TOLERANCE

- A. Wall surface plane must be plumb and level within +/- ¼ inch in 20 feet in any direction.

3.4 INSTALLATION

A. General: Install products in accordance with the latest installation guidelines of the manufacturer and all applicable building codes and other laws, rules, regulations and ordinances. Review all manufacturer installation, maintenance instructions, and other applicable documents before installation.

- 1. Technical Design Review (TDR) process is available to evaluate project feasibility.

B. Panel Cutting

- 1. Always cut DEKKO concrete panels outside or in a well-ventilated area. Do not cut the products in an enclosed area.
- 2. Always wear safety glasses and NIOSH/OSHA approved respirator when cutting, drilling, sawing, sanding or abrading the products. Refer to manufacturer SDS for more information.
- 3. Use a dust-reducing circular saw with a diamond-tipped or carbide-tipped blade.
- 4. DEKKO concrete products may contain some amounts of crystalline silica, a naturally occurring, potentially hazardous mineral when airborne in dust form.
- 5. Immediately clean dust from cut panels as it may bind to the finish.

3.5 CLEANING AND MAINTENANCE

- A. Review manufacturer guidelines for detailed care instructions.
- B. Perform cleaning procedures according to DEKKO's written instructions.
- C. Clean soiled UHPC surfaces with non-abrasive cleaners and water, using soft fiber brushes, rags and sponges, and rinse with clean water.

END OF SECTION 04 42 00