**Amorim Expanded Cork Insulation**

1. Section 072100   
   Thermal Insulation
   1. PART 1  GENERAL
      1. SECTION INCLUDES
         1. Cork Insulation Board insulation​​ at ​cavity wall construction, and over roof deck​.
         2. Insulating coating.
         3. Radiant barrier insulation.
      2. RELATED REQUIREMENTS
         1. Section 061000 - Rough Carpentry:  Installation requirements for board insulation over steep slope roof sheathing or roof structure.
         2. Section 072600 - Vapor Retarders:  Separate vapor retarder materials.
         3. Section 072700 - Air Barriers:  Separate air barrier materials.
      3. DEFINITIONS
         1. Expanded Insulation Cork Panels: Insulation referred to as natural cork bark board or granule insulation is composed of 100% renewable ground up cork oak tree bark and processed through heat and steam into rigid insulation panels.
      4. REFERENCE STANDARDS
         1. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
         2. ASTM C518-15 – Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
         3. ISO 14025 / 21930 - Environmental Product Declaration (EPD)
      5. SUBMITTALS
         1. Product Data: Provide data on product characteristics, performance criteria, and product limitations.
         2. Declare Label indicating Red List Free ingredients.
         3. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
         4. Manufacturer's Installation Instructions: Include information on special environmental conditions required for installation and installation techniques.
      6. QUALITY ASSURANCE
         1. Verify all materials are inspected for defects prior to installation.
      7. FIELD CONDITIONS
         1. Do not install insulation adhesives when temperature or weather conditions are detrimental to successful installation.
   2. PART 2  PRODUCTS
      1. APPLICATIONS
         1. Insulation Under Concrete Slabs:  Expanded Insulation Corkboard
         2. Insulation at Perimeter of Foundation:  Expanded Insulation Corkboard.
         3. Insulation Inside Masonry Cavity Walls:  Expanded Insulation Corkboard.
         4. Insulation Inside Prefabricated Wall Panels:  Expanded Insulation Corkboard.
         5. Insulation Over Metal Stud Framed Walls, Continuous:  ​ Expanded Insulation Corkboard.
         6. Insulation on Inside of Framed Walls with Exposed Facer Providing Interior Finish:  Expanded Insulation Corkboard.
         7. Insulation on Inside of Concrete and Masonry Exterior Walls:  Expanded Insulation Corkboard
         8. Insulation in Metal Framed Walls:  Expanded Insulation Corkboard with ​no​ vapor retarder.
         9. Insulation in Wood Framed Walls:  Expanded Insulation Corkboard with separate vapor retarder.
         10. Insulation in Wood Framed Ceiling Structure:  Expanded Insulation Corkboard with separate vapor retarder.
         11. Insulation Above Lay-In Acoustical Ceilings:  Expanded Insulation Corkboard with no vapor retarder.
         12. Insulation Over Roof Deck:  Expanded Insulation Corkboard.
         13. Insulation at Structural Connections:  Expanded Insulation Corkboard.
      2. expanded cork BOARD INSULATION MATERIALS
         1. Expanded Cork Board Insulation Panels:
            1. Flame Spread Index (FSI):  Class B - 26 to 75, when tested in accordance with ASTM E84.
            2. Smoke Developed Index (SDI): 450 or less, when tested in accordance with ASTM E84.
            3. Board Size:  39.37 inch by 19.685 inch.
            4. Board Thickness: 2, 3, 4, 5, 6, 8, 12 inch.
            5. Board Edges: Square
            6. Type and Compressive Resistance:  Type XI, 5 psi (35 kPa), minimum.
            7. Type and Water Absorption:  Type XI, 4.0 percent by volume, maximum, by total immersion.
            8. Thermal Resistance, R-value: 4 minimum, per 1 inch thickness
            9. Products:

Amorim Expanded Cork Insulation Panels

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Substitutions:  See Section 016000 - Product Requirements.

* + 1. ACCESSORIES
       1. Sheet Vapor Retarder:  See Section 072600.
       2. Sheet Vapor Retarder:  Black polyethylene film for above grade application, 10 mil, 0.010 inch thick.
       3. Tape:  Reinforced polyethylene film with acrylic pressure sensitive adhesive.
          1. Application:  Sealing of interior circular penetrations, such as pipes or cables.
          2. Width:  Are required for application.
          3. Temperature Resistance:  Range of minus 40 to 212 degrees F.
          4. Products:

SIGA Cover Inc; SIGA-Rissan:  www.siga.swiss/global\_en/#sle.

Substitutions:  See Section 016000 - Product Requirements.

* + - 1. Self-Adhered Transition Flashing:  Multipurpose, self-adhered flashing with modified butyl adhesive, polyester fiber top sheet, and polypropylene interlayer.
         1. Application:  Primerless adhesion for use as through-wall flashings and wall transitions to roof and below-grade systems.
         2. Thickness: 45 mil, 0.045 inch, nominal.
         3. Size: 6 inches wide, in rolls 75 feet long.
         4. Tensile Strength:  Greater than 1,300 psi complying with ASTM D412 test method.
         5. Products:

DuPont de Nemours, Inc; DuraGard CM Transition Flashing:  building.dupont.com/#sle.

Substitutions:  See Section 016000 - Product Requirements.

* + - 1. Flashing Tape:  Special reinforced film with high performance adhesive.
         1. Application:  Window and door opening flashing tape.
         2. Width:  As required for application.
         3. Primer:  Tape manufacturer's recommended product.
         4. Products:

Protecto Wrap Company; Protecto Super Stick Building Tape:  www.protectowrap.com/#sle.

Substitutions:  See Section 016000 - Product Requirements.

* + - 1. Tape:  Bright aluminum self-adhering type, mesh reinforced, 2 inch wide.
      2. Tape joints of rigid insulation in accordance with roofing and insulation manufacturers' instructions.
      3. Air and Moisture Sealing Insulation Fasteners:  Preassembled fastener units consisting of sealing washer, screw, and gasketing tube.
         1. Length as required for thickness of insulation material and penetration of deck substrate.
         2. Thread and tip types as required for substrate material.
         3. Products:

TruFast Walls, a Division of Altenloh, Brinck & Co. US, Inc; Grip-Deck TubeSeal:  www.trufastwalls.com/#sle.

Substitutions:  See Section 016000 - Product Requirements.

* + - 1. Rigid Insulation Pronged Attachment Washers:  Solid plastic cap washer with prongs and flexible perimeter seal attached with screws to substrate for attachment of rigid insulation and to help seal against air and moisture penetration through weather barrier assembly.
         1. Products:

TruFast Walls, a Division of Altenloh, Brinck & Co. US, Inc; Thermal-Grip ci Prong Washer:  www.trufastwalls.com/#sle.

Substitutions:  See Section 016000 - Product Requirements.

* + - 1. Insulation Fasteners:  Appropriate for purpose intended and approved by roofing manufacturer.
         1. Length as required for thickness of insulation material and penetration of deck substrate.
         2. Products:

Advanced Architectural Products, LLC; SMARTci Plus 3-in-1 System:  www.smartcisystems.com/#sle.

Advanced Architectural Products, LLC; SMARTci 2-in-1 System:  www.smartcisystems.com/#sle.

* + - 1. Continuous Insulation (CI) Support Clips:  Thermally-broken, with thermal spacer clip or steel support clip with thermal isolator pad for support of cladding z-girts, angles, channels, and other insulation framing.
         1. Thermal Spacer Clip:  Pultruded glass fiber and thermoset polyester resin clip; 3/16 inch thick at top, base, and web.
         2. Galvanized Steel Support Clip:  14 gauge, 0.0747 inch, G90/Z275 galvanized support clip complying with ASTM A653/A653M, with integral glass fiber reinforced polyamide thermal isolator pad.
         3. Clip Depth:  As indicated on drawings.
         4. Products:

Northern Facades; ISO Clip:  www.northernfacades.com/#sle.

Substitutions:  See Section 016000 - Product Requirements.

* + - 1. Nails or Staples:  Steel wire; electroplated or galvanized; type and size to suit application.
      2. Protection Board for Below Grade Insulation:  Cementitious, 1/4 inch thick.
      3. Adhesive:  Type recommended by insulation manufacturer for application.
  1. PART 3  EXECUTION
     1. EXAMINATION
        1. Verify that substrate, adjacent materials, and insulation materials are dry and that substrates are ready to receive insulation.
        2. Verify substrate surfaces are flat, free of irregularities, or materials or substances that may impede adhesive bond.
     2. BOARD INSTALLATION AT EXTERIOR WALLS
        1. Adhere 6 inches wide strip of polyethylene sheet over expansion joints with double beads of adhesive each side of joint.
           1. Tape seal joints between sheets.
           2. Extend sheet full height of joint.
        2. Apply adhesive to back of boards:
           1. Three continuous beads per board length.
           2. Full bed 1/8 inch thick.
        3. Install rigid insulation directly to steel studs or exterior grade sheathing at 16 inches on center with manufacturer recommended mechanical fasteners, and tape joints with manufacturer's minimum 4 inches wide sealant tape;
        4. Install boards horizontally on walls.
           1. Place boards to maximize adhesive contact.
           2. Install in running bond pattern.
           3. Butt edges and ends tightly to adjacent boards and protrusions.
        5. Extend boards over expansion joints, unbonded to wall on one side of joint.
        6. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.
        7. Place 6 inches wide polyethylene sheet at perimeter of wall openings, from adhesive vapor retarder bed to window and door frames, and tape seal in place to ensure continuity of vapor retarder and air seal.
        8. Tape insulation board joints.
     3. BOARD INSTALLATION AT CAVITY WALLS
        1. Install boards to fit snugly between wall ties.
           1. Place membrane surface against adhesive.
           2. Place membrane surface facing out, and tape seal board joints.
        2. Install boards horizontally on walls.
           1. Place boards to maximize adhesive contact.
           2. Install in running bond pattern.
           3. Butt edges and ends tightly to adjacent boards and protrusions.
           4. Place impale fastener locking discs.
        3. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.
        4. Place 6 inches wide polyethylene sheet at perimeter of wall openings, from adhesive vapor retarder bed to window and door frames, and tape seal in place to ensure continuity of vapor retarder and air seal.
     4. BOARD INSTALLATION UNDER CONCRETE SLABS
        1. Place insulation under slabs on grade after base for slab has been compacted.
        2. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.
        3. Prevent insulation from being displaced or damaged while placing vapor retarder and placing slab.
     5. BOARD INSTALLATION OVER LOW SLOPE ROOF DECK
        1. Installation of board insulation over low slope roof deck, see Section \_\_\_\_\_\_\_.
        2. Board Installation Over Roof Deck, General:
           1. See applicable roofing specification section for specific board installation requirements.
           2. Ensure vapor retarder is clean and dry, continuous, and ready for application of roofing system.
           3. Fasten insulation to deck in accordance with roofing manufacturer's written instructions and applicable Factory Mutual requirements.
           4. Do not apply more insulation than can be covered with roofing on the same day.
     6. BOARD INSTALLATION OVER STEEP SLOPE ROOF SHEATHING OR ROOF STRUCTURE
        1. Installation of board insulation over steep slope roof structure or roof sheathing, see Section 061000.
        2. See Section 014000 - Quality Requirements for additional requirements.
        3. Coordination of Air Barrier Association of America (ABAA) Tests and Inspections:
           1. Provide testing and inspection required by ABAA Quality Assurance Program (QAP).
           2. Notify ABAA in writing of schedule for air barrier work, and allow adequate time for testing and inspection.
           3. Cooperate with ABAA testing agency.
           4. Allow access to air barrier work areas and staging.
           5. Do not cover air barrier work until tested, inspected, and accepted.
     7. PROTECTION
        1. Do not permit installed insulation to be damaged prior to its concealment.