SECTION  – plenum acoustic board insulation

1. General
   1. SUMMARY
      1. This Section includes requirements for supply and installation of the following:

SPEC NOTE: Edit the following to reflect what is required on the Project. Delete paragraphs that are not required on this Project.

* + - 1. Self-Supporting Plenum Insulation Board.
      2. Pinned Plenum Insulation Board.
  1. REFERENCE Standards
     1. Underwriters Laboratories of Canada (ULC):
        1. CAN/ULC S102, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.
        2. CAN/ULC S114, Standard Method of Test for Determination of Non-Combustibility in Building Materials.
     2. American Society for Testing and Materials (ASTM):
        1. ASTM C-612, Standard Specification for Mineral Fiber Block and Board Thermal Insulation.
        2. ASTM E-1111/E-1111M, Standard Test Method for Measuring the Interzone Attenuation of Open Office Components.
        3. ASTM E-1414/E-1414M, Standard Test Method for Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum.
  2. SUBMITTALS
     1. Provide submittals in accordance with Section 01 33 00 – Submittal Procedures.
     2. Affidavits:
        1. In lieu of samples and inspection procedures when required by CGSB and CAN/ULC Standards, submit affidavits, if requested, that materials supplied under these requirements meet CGSB and CAN/ULC Standards.
     3. Safety Data Sheets:
        1. Submit WHMIS safety data sheets for inclusion with project record documents. Keep one copy of WHMIS safety data sheets on site for reference by workers.
  3. administrative requirements
     1. Pre-Installation Meetings:
        1. Conduct meeting at Project site.
        2. Agenda includes Project conditions, coordination with work of other trades and layout of items which penetrate plenum barrier board insulation.
  4. quality assurance
     1. Board Insulation Installer Quality Assurance: Work experience of five (5) years minimum with work similar to Work of this Section.
  5. DELIVERY, STORAGE AND HANDLING
     1. Store insulation materials in dry areas, protected from wetting, sunlight, and traffic. Store insulation board flat on a flat surface, and to prevent edge damage and placing of materials on top of stored boards.
     2. Protect board insulation from excessive moisture in shipment, storage, and handling.
        1. Protect edges from being crushed, dented, or torn in shipment, storage, and handling.
        2. Deliver in protected pallets and store in a dry place with adequate air circulation.
        3. Store in original packaging until installed.

1. Products
   1. MANUFACTURERS
      1. Basis-of-Design Products: Products named in this Section were used as the basis-of-design for the project; additional manufacturers offering similar products may be incorporated into the work of this Section provided they meet the performance requirements established by the named products and provided they submit requests for substitution five (5) days in advance of Bid Closing.
      2. Acceptable Manufacturers: Subject to compliance with requirements specified in this Section, manufacturers offering products that may be incorporated into the Work include the following:
         1. ROCKWOOL.
         2. ROCKFON.
   2. MATERIALS

SPEC NOTE: Use the following plenum insulation board where interior walls don’t span above the ceiling.

* + 1. Self-Supporting Plenum Insulation Board:
       1. Characteristics:
          1. Size: 610 mm x 1220 mm (24” x 48”).
          2. Thickness: 38 mm (1-1/2”).
          3. Facing: Aluminum foil with fibre reinforcement.
          4. Density: 128.15 kg/m3 (8.0 lbs/cu ft) (actual density).
          5. Fire Class: Class A.
          6. Fire Performance: CAN/ULC-S102 Flame Spread / Smoke Developed: 25/50.
       2. Basis of Design Material: ROCKFON Plenum Barrier Board by ROCKFON.

SPEC NOTE: Use the following plenum insulation board where interior walls span to underside of the deck.

* + 1. Pinned Plenum Insulation Board:
       1. Faced, non-combustible, rigid, mineral wool fire rated insulation board to ASTM C612, Type IVB.
          1. Surface Burning Characteristics: To CAN/ULC S102.
          2. Non-combustibility: To CAN/ULC S114.
          3. Compressive resistance:

At 10 %: 16.9 kPa to ASTM C165.

At 25 %: 28.1 kPa to ASTM C165.

* + - * 1. Thickness: 50mm, unless otherwise indicated on the Drawings.
        2. Facer: Aluminum foil with fiberglass (RFF) reinforcement to ASTM.
        3. Basis of Design Material: ROCKBOARD 40 with RFF Facer by ROCKWOOL.
  1. ACCESSORIES
     1. Insulation Fasteners:
        1. Mechanical Fasteners: High quality, impact resistant plastic fastener system specifically designed for installation of board insulation materials; 38mm (1-1/2”) diameter, shaft length to suit insulation thickness and hot dipped galvanized fastener to suit substrate.
     2. Acoustical Sealant: As indicated in Section 07 92 00 – Joint Sealants.
     3. Adhesive: All-purpose construction adhesive in accordance with insulation manufacturer’s written recommendations.
     4. RFF Facer Seam Tape: Aluminum foil with fiberglass reinforcement to ASTM, as recommended by the manufacturer, to be compatible with the insulation board.

1. Execution
   1. EXAMINATION
      1. Before commencing work, ensure that all surfaces to which plenum insulation board is applied are clean, reasonably smooth with no abrupt changes in plane, and that the surfaces are otherwise acceptable for insulation application as specified.
      2. Examine walls, ceiling grid, ducts, pipes, and conduits including suspension and bracing assemblies, with installers present, for conditions affecting performance of plenum insulation board.
      3. Proceed with installation only after unsatisfactory conditions have been corrected.
   2. PREPARATION
      1. Clean substrates of substances harmful to insulations; remove projections that interfere with insulation attachment.
      2. Proceed with installation only after unsatisfactory conditions have been corrected.
   3. INSTALLATION
      1. Install insulation and accessories in accordance with manufacturer's written instructions applicable to products and application indicated and as follows:
         1. Use insulation that is undamaged, dry, and unsoiled.
         2. Maintain continuous sound barrier and air tightness for building spaces and elements, and as follows:
            1. Saw cut and trim insulation neatly to fit spaces.
            2. Butt edges and ends tight and tape joints using foil tape on both sides of insulation board.
            3. Fit insulation tight against mechanical, electrical and other items protruding through the plane of insulation and tap joints using foil tape. Keep insulation minimum 75mm (3”) from heat emitting devices such as recessed light fixtures, and minimum 50mm (2”) from sidewalls of vents.
            4. Use insulation free of broken or chipped edges.
            5. Apply single layer of insulation to produce thickness and STC Rating indicated unless multiple layers are otherwise specifically shown or required to make up total STC Rating.
            6. Fit insulation firmly against substrate using mechanical fasteners spaced in accordance with manufacturers recommended spacing and pattern; In addition, adhere insulation to substrate surfaces and provide additional fasteners to eliminate air spaces between insulation and substrate, in accordance with insulation manufacturer’s written recommendations.
            7. Seal joints with acoustical joint sealant in accordance with Section 07 92 00 – Joint Sealants.

END OF SECTION