SECTION 078200 - BOARD FIRE PROTECTION

Revise this Section by deleting and inserting text to meet Project-specific requirements.

MasterSpec includes provisions for LEED 2009, LEED v4, IgCC, and Green Globes. Sustainable design requirements may be inserted in the Section Text using the hypertext links.

1. GENERAL
   * + 1. SUMMARY
          1. Section Includes:

Calcium-silicate board fire protection.

Mineral-fiber board fire protection.

Refer to sections listed below for cross-reference requirements Contractor might expect to find in this Section but are specified in other Sections. Sections listed below are for spec editor’s and design team coordination and are to remain as Editor’s Notes. Remove referenced specification sections within the body of the specification if not applicable to the project.

Section 230713"Duct Insulation" for fire-rated duct insulation.

* + - 1. PREINSTALLATION MEETINGS

Retain "Preinstallation Conference" paragraph below if Work of this Section is extensive or complex enough to justify a conference.

* + - * 1. Preinstallation Conference: Conduct conference at Project site.
      1. SUBMITTALS
         1. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.
         2. Manufacturer’s installation instructions shall be provided along with product data.
         3. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).
         4. Product Data:

Provide Manufacturer’s installation instructions.

Calcium-silicate board.

Mineral-fiber board.

Joint treatment and finishing materials.

* + - * 1. Shop Drawings:

Locations and types of surface preparations required before applying board fire protection.

Structural framing plan showing extent of board fire protection for each location and fire-resistance rating, including the following:

Applicable fire-resistance design designations of qualified testing and inspecting agency acceptable to authorities having jurisdiction.

Retain first subparagraph below if Drawings indicate steel joists needing protection. Coordinate and verify joist sizes and maximum tensile stresses with Project's structural engineer. Include both joist sizes and stresses on structural Drawings or in a schedule.

For steel joist assemblies, include applicable fire-resistance design designations, with each steel joist tested with same maximum tensile stress as each steel joist indicated [on Drawings] [in a schedule]. Design designations with steel joists tested at lower maximum tensile stress than those indicated are not permitted.

Minimum thicknesses needed to achieve required fire-resistance ratings of structural components and assemblies.

Retain "Sustainable Design Submittals" paragraph below if required to attain sustainability rating or to track sustainability submittals.

* + - * 1. Sustainable Design Submittals:

1. PRODUCTS

Before selecting manufacturers and products, verify availability, suitability for intended applications, and compliance with minimum performance requirements.

Product options commonly available from manufacturers are included in square brackets throughout the Section Text. Not every manufacturer listed can provide every option offered; verify availability with manufacturers.

* + - 1. SOURCE LIMITATIONS

Retain this article to limit sources for the entire Section. Source limitations may also be specified in individual articles if desired. Retain option if one manufacturer cannot satisfy all design conditions.

* + - * 1. Obtain board fire protection **[for each fire-resistance design]** from single source.
      1. PERFORMANCE REQUIREMENTS
         1. Fire-Resistance Ratings: Indicated by design designations from **[UL's "Fire Resistance Directory"] [UL's "Fire Resistance Directory" or from listings of another testing and inspecting agency acceptable to authorities having jurisdiction,] <Insert testing agency>** for board fire protection serving as direct-applied protection tested in accordance with ASTM E119.
      2. BOARD FIRE PROTECTION
         1. Calcium-Silicate Board: Rigid board containing no asbestos and consisting primarily of lime, silica, inert fillers, and cellulosic reinforcing fibers; of thickness required to produce fire-resistance rating indicated; with flame-spread and smoke-developed indexes of zero in accordance with ASTM E84; passing ASTM E136 for combustion characteristics.

Finish: Sanded finish on **[both sides] [one side]**.

* + - * 1. Mineral-Fiber Board: **[Unfaced] [Foil-faced] [Fiberglass mat-faced]** rigid board produced by combining slag-wool-/rock-wool fibers with thermosetting resin binders passing ASTM E136 for combustion characteristics; of thickness required to produce fire-resistance rating indicated.

Coordinate options in "Maximum Density" and "Surface-Burning Characteristics" subparagraphs below with products selected.

Maximum Density: **[8 lb/cu. ft.] [10 lb/cu. ft.] [12 lb/cu. ft.] <Insert value>**.

Surface-Burning Characteristics: Flame-spread and smoke-developed indexes of [15] [zero] and [5] [zero], respectively, in accordance with ASTM E84.

* + - 1. ACCESSORIES

Board anchorage systems differ. UL designs and other agencies include specific requirements for anchorage materials and methods.

* + - * 1. Anchorage Accessories: Provide manufacturer's standard board-anchorage components complying with related design of UL or of another testing and inspecting agency acceptable to authorities having jurisdiction.

Retain "Joint Treatment and Finishing Materials" paragraph below for calcium-silicate board to be finished for painting and for exposed applications.

* + - * 1. Joint Treatment and Finishing Materials: For calcium-silicate board applications exposed to view, provide joint treatment tape and joint compounds recommended in writing by board manufacturer for finishing surfaces.

1. EXECUTION
   * + 1. EXAMINATION
          1. Examine areas and conditions of construction to receive fire protection, with Installer present, for compliance with requirements for installation tolerances, and other conditions affecting performance of the Work.
          2. Reject fire-protection materials that are wet, moisture damaged, or mold damaged.
          3. Examine walls, floors, and other construction for suitable conditions where fire-protection materials will be installed.
          4. Proceed with installation only after unsatisfactory conditions have been corrected.
       2. PREPARATION
          1. Install board fire protection on structural members after piping and other construction behind fire-resistive materials have been completed.
       3. INSTALLATION
          1. Install board fire protection in accordance with manufacturer's written instructions.
          2. Install board fire protection to comply with requirements for layer thicknesses and number, construction of joints and corners, and anchorage methods applicable to fire-resistance-rated assemblies indicated.
          3. Install enclosing or concealing construction only after board fire protection has been applied and inspected by authorities having jurisdiction.

Retain paragraph below if exposed-to-view calcium-silicate board is to be finished.

* + - * 1. Finish calcium-silicate board [exposed to view] [where indicated on Drawings] to comply with board manufacturer's written instructions and as follows:

At joints in calcium-silicate board, embed tape in joint compound and apply first, fill, and finish coats of joint compounds over tape, fastener heads, and accessories.

Apply a thin, uniform skim coat of joint compound over entire surface.

Touch up and sand between coats and after last coat as needed to produce a surface free of visual defects, tool marks, and ridges.

* + - 1. PROTECTION
         1. Replace or repair board fire protection that has been cut away to facilitate other construction. Maintain complete coverage of full thickness on members and substrates protected by board fire protection.

Provide final protection and maintain conditions in a manner acceptable to Installer, manufacturer, and authorities having jurisdiction to ensure that board fire protection is without damage or deterioration at time of Substantial Completion.

END OF SECTION 078200