SECTION 09 29 13 – type x gypsum board

SPEC NOTE: This Section is for Interior and core and shell Projects. Use this Section for specifying Type X 5/8-inch-thick gypsum board and mineral fibre acoustical insulation.

Regular non-type X gypsum board is specified separately in 09 29 00 – Gypsum Board.

Gypsum shaftwall assemblies are specified separately in "Gypsum Board Shaft-Wall Assemblies."

1. GENERAL
   1. summary
      1. This Section includes requirements for supply of type x gypsum boards and mineral fibre acoustical insulation components required for wall and ceiling assemblies.
      2. Related Requirements:
         1. Section 09 29 00 – Gypsum Board" for installation of Type X 5/8-inch gypsum board and mineral fibre acoustical insulation.
   2. REFERENCE STANDARDS
      1. American Society for Testing and Materials International (ASTM):
         1. ASTM C 11-10a, Standard Terminology Relating to Gypsum and Related Building Materials.
         2. ASTM C 473-12, Standard Test Methods for Physical Testing of Gypsum Panel Products.
         3. ASTM C 665-12, Standard Specification for Mineral-Fibre Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.
         4. ASTM C 1396/C 1396M-11, Standard Specification for Gypsum Board.
         5. ASTM D 3273-12, Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.
      2. Gypsum Association (GA):
         1. GA-238, Guidelines for the Prevention of Mold Growth on Gypsum Board.
   3. submittals
      1. Sustainable Design Submittals: Refer to Division 01 Section 01 81 13 – Sustainable Design Requirements.
   4. Informational Submittals

The following submittal is a part of the GPS Standards and is required for all projects, relating to the Global Warming Potential (embodied carbon) limits established for select products. Contractors must submit a Type III EPD to verify that the product does not exceed the embodied carbon limits listed in Part II.

* + 1. Embodied Carbon Reporting: Type III Environmental Product Declarations, per ISO 14025 disclosing the Global Warming Potential of the product from Stages A1 through A3 in accordance with Section 01 81 33 "Sustainable Design Requirements - Embodied Carbon" for products listed under "Embodied Carbon Reporting" in Article "Quality Assurance."

The following submittal is a part of the GPS Standards and is required for all projects. This relates to TVOC emissions testing reports or certificates listed under 'Quality Assurance' for select product types.

* + 1. TVOC Emissions: Laboratory test reports or third-party certificates showing compliance with the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers" version 1.2-2017.

The following submittal is a part of the GPS Standards and is required for all projects. This relates to material ingredient disclosure reports listed under 'Quality Assurance' for select product types.

* + 1. Material Ingredient Disclosure: Submit one of the following reports:
       1. Health Product Declaration.
       2. UL Product Lens.
       3. Living Building Challenge Declare Label or Living Product Challenge Label.
       4. EPEA Material Health Statement.
       5. Cradle-to-Cradle v4 Material Health Certificate or multi-attribute certificate.

The following submittal is a part of the GPS Standards and is required for all projects.

* + 1. Sustainability Reporting: Provide the following.
       1. Recycled content, including Pre-consumer and post-consumer percentages.
       2. Biobased content.
       3. Manufacturing location for ceiling products.
       4. End of Life.
          1. Gypsum Board: Third-party partnership for product recovery and recycling.
          2. Sound Attenuation Blankets: Manufacturing Take-Back Program or Third-party partnership for product recovery and recycling.
  1. QUALITY ASSURANCE

The following requirement is a part of the GPS Standards and is required for all projects. This corresponds to the GPS Standards requiring that select products have EPDs and relates to product-specific requirements for embodied carbon limits (GWP maximums) listed under Part II.

* + 1. Embodied Carbon Reporting: Obtain products with the following publicly available, third-party verified Type III Environmental Product Declaration (EPDs) in accordance with Section 01 81 33 – Sustainable Design Requirements - Embodied Carbon.
       1. Type X 5/8-inch gypsum board: Product-Specific EPDs.
       2. Mineral fibre acoustical insulation components: Industry-wide or Product-specific EPDs.

The following requirement is a part of the GPS Standards and is required for all projects. This corresponds to the GPS Standards requiring that select products have testing reports or certificates for the California Department of Public Health (CDPH) Standard Method v1.2-2017 emissions testing ("TVOC emissions").

* + 1. TVOC Emissions: Obtain the following products with publicly available reports or certificates verifying compliance with the requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers" version 1.2-2017, following the private office scenario:
       1. Type X 5/8-inch gypsum board.
       2. Mineral fibre acoustical insulation components.

The following requirement is a part of the GPS Standards and is required for all projects.

* + 1. Material Ingredient Disclosure: Obtain the following products with publicly available reports disclosing material ingredients to residuals no greater than 1000ppm:
       1. Type X 5/8-inch gypsum board.
       2. Mineral fibre acoustical insulation components.
    2. Single Source Responsibility for Panel Products: Obtain each type of gypsum board and other panel products from a single manufacturer.
  1. DELIVERY, STORAGE, HANDLING AND protection
     1. Coordinate deliveries to comply with construction schedule and arrange ahead for off the ground, enclosed, under cover storage location. Do not load any area beyond the design limits.
     2. Materials shall be carefully checked, unloaded, stored, and handled to prevent damage. Protect materials with suitable non-staining waterproof coverings.
     3. Store material in original, undamaged containers or wrappings with manufacturer's seals and labels intact, in accordance with GA-238 and manufacturer's recommendations.
     4. Protect bagged products from excessive moisture or wetting. Store metal component sections in crates to prevent damage to material. Do not use bent or deformed material.
  2. PROJECT CONDITIONS
     1. General: Refer to Section 09 29 00 – Gypsum Board.

1. products
   1. MATERIALS – WALLBOARD
      1. Fire-Rated Gypsum Board 'Type X':
         1. Conforming to ASTM C 1396, 1220mm (48") wide sheets of maximum practical lengths to minimize end joints, tapered edges, 16mm (5/8") thick, as indicated on Drawings.

SPEC NOTE: The following requirement is a part of the **GPS Standards** and **is required for all projects**.

* + - 1. Embodied Carbon: Maximum Global Warming Potential for Production Stages A1 through A3 as defined in Section 01 81 33 "Sustainable Design Requirements - Embodied Carbon": 3.3 kg of CO2eq per m2.
      2. One of the following:
         1. Sheetrock Brand UltraLight Panels, Firecode X by CGC Inc.
         2. Type X 5/8 inch Gypsum Board by CertainTeed.
         3. 5/8 inch ToughRock Fireguard X by Georgia-Pacific Canada.
  1. ACCESSORIES
     1. Mineral Fibre Acoustical Insulation:
        1. Unfaced, preformed mineral slag batt insulation in accordance with CAN/ULC S702, Type 1; having a nominal RSI of 0.67/25 mm; rated non-combustible in accordance with CAN/ULC S114 and having a flame spread index of 0 or less in accordance with CAN/ULC S102; density 40 kg/m3; STC 52, square edges, thickness as required to meet design insulation values indicated on Drawings or as required to fill insulated spaces where not indicated, and as follows:

SPEC NOTE: Retain one of the two subparagraphs below. The first subparagraph aligns with the ‘Gensler Standard’ of the GPS criteria and will be typical for most projects. The second subparagraph aligns with the ‘Market Differentiator’ level of performance. Retain ‘Market Differentiator’ requirements only if the project intends to maintain an enhanced level of sustainability performance for product selections. The GWP value is found within the product specific EPD, for which an action submittal is required to validate compliance.

* + - 1. Embodied Carbon: Maximum Global Warming Potential for Production Stages A1 through A3 as defined in Section 01 81 33 "Sustainable Design Requirements - Embodied Carbon": 3.3 kg of CO2eq per m2.

SPEC NOTE: The following products below have reported GWP values (as of 1/1/2024): Rockwool AFB = 1.31 kgCO2-eq/m2; Rockwool AFB Evo = 1.179 kgCO2eq/m2; Thermafiber Formaldehyde Free SAFB Blankets = 2.03 kgCO2eq/m2 (Wabash IN plant), 1.03 kgCO2eq/m2 (Joplin MO plant).

* + - 1. Basis of Design Materials:
         1. Rockwool, AFB.
         2. Owens Corning/Thermafiber; Thermafiber SAFB.

1. execution
   1. installation
      1. General: Refer to Section 09 29 00 – Gypsum Board.

end of section