

PART 1 - GENERAL

1.1 Summary

- .1 Section Includes:
  - .1 Gypsum wallboard, Regular, Type X, Type C.
  - .2 Trim accessories, including trims at window mullion interface.
  - .3 Joint treatment materials and spackling.
  - .4 Access doors in non-rated ceiling with lids made of gypsum board.
- .2 Related Work:
  - .1 Division 09 Section *Interior Painting*.

1.2 Action Submittals

- .1 Product Data: For each type of product.
- .2 Samples: For the following products:
  - .1 Trim Accessories: Full-size Sample in 300 mm long length for each trim accessory indicated.

1.3 Delivery, Storage and Handling

- .1 Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

1.4 Field Conditions

- .1 Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.
- .2 Do not install paper-faced gypsum panels until installation areas are enclosed and conditioned.
- .3 Do not install panels that are wet, those that are moisture damaged, and those that are mould damaged.
  - .1 Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
  - .2 Indications that panels are mould damaged include, but are not limited to, fuzzy or splotchy surface contamination and discolouration.

PART 2 - PRODUCTS

2.1 Performance Requirements

- .1 Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to CAN/ULC-S101 by an independent testing agency.
- .2 STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.
- .3 Low-Emitting Materials: For ceiling and wall assemblies, provide materials and construction identical to those tested in assembly and complying with the testing and product requirements of the California Department of Health Services' *Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers*.

2.2 Gypsum Board General

- .1 Recycled Content of Gypsum Panel Products: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 15 percent.
- .2 Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

2.3 Interior Gypsum Board

- .1 Gypsum Board, Type X:  
ASTM C 1396/C 1396M.
  - .1 Thickness: 15.9 mm.

2.4 Trim Accessories

- .1 Interior Trim: ASTM C 1047.
  - .1 Material: Galvanized or aluminum-coated steel sheet, rolled zinc, plastic, or paper-faced galvanized steel sheet.
  - .2 Shapes:
    - .1 Cornerbead.
    - .2 Bullnose bead.
    - .3 LC-Bead: J-shaped; exposed long

- flange receives joint compound.
- .4 L-Bead: L-shaped; exposed long flange receives joint compound.
- .5 U-Bead: J-shaped; exposed short flange does not receive joint compound.
- .6 Expansion (control) joint.
- .7 Curved-Edge Cornerbead: With notched or flexible flanges.

- .2 Trim for Non-Rated Ceiling Access Hatches with lids made of Gypsum Board:
  - .1 PVC Access Door Beads with 16mm flange. Extra thick with a mud leg for easy finishing

## 2.5 Joint Treatment Materials

- .1 General: Comply with ASTM C 475/C 475M.
- .2 Joint Tape:
  - .1 Interior Gypsum Board: Paper.
- .3 Joint Compound for Interior Gypsum Board: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.
  - .1 Prefilling: At open joints, rounded or bevelled panel edges, and damaged surface areas, use setting-type taping compound.
  - .2 Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use drying-type, all-purpose compound.
    - .1 Use setting-type compound for installing paper-faced metal trim accessories.
  - .3 Fill Coat: For second coat, use drying-type, all-purpose compound.
  - .4 Finish Coat: For third coat, use drying-type, all-purpose compound.
  - .5 Skim Coat: For final coat of Level 5 finish, use drying-type, all-purpose compound.

## 2.6 Auxiliary Materials

- .1 General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.
- .2 Steel Drill Screws: ASTM C 1002, unless

otherwise indicated.

- .1 Use screws complying with ASTM C 954 for fastening panels to steel members from 0.84 to 2.84 mm thick.
- .2 For fastening cementitious backer units, use screws of type and size recommended by panel manufacturer.
- .3 Acoustical Joint Sealant: Manufacturer's standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 834. Product effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.
  - .1 Acoustical joint sealant shall have a VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
  - .2 Acoustical joint sealant shall comply with the testing and product requirements of the California Department of Health Services' *Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers*.

### PART 3 - EXECUTION

#### 3.1 Examination

- .1 Examine areas and substrates including welded hollow-metal frames and framing, with Installer present, for compliance with requirements and other conditions affecting performance.
- .2 Examine panels before installation. Reject panels that are wet, moisture damaged, and mould damaged.
- .3 Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 Applying and Finishing Panels, General

- .1 Comply with ASTM C 840.
- .2 Install ceiling panels across framing to minimize the number of abutting end joints and to avoid abutting end joints

in central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.

- .3 Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1.5 mm of open space between panels. Do not force into place.
- .4 Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.
- .5 Form control and expansion joints with space between edges of adjoining gypsum panels.
- .6 Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.
  - .1 Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 0.7 sq. m in area.
  - .2 Fit gypsum panels around ducts, pipes, and conduits.
  - .3 Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow 6.4 to 9.5 mm wide joints to install sealant.
- .7 Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide 6.4 to 12.7 mm wide spaces at these locations and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting

structural surfaces with acoustical sealant.

- .8 Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.
- .9 Wood Framing: Install gypsum panels over wood framing, with floating internal corner construction. Do not attach gypsum panels across the flat grain of wide-dimension lumber, including floor joists and headers. Float gypsum panels over these members or provide control joints to counteract wood shrinkage.
- .10 STC-Rated Assemblies: Seal construction at perimeters, behind control joints, and at openings and penetrations with a continuous bead of acoustical sealant. Install acoustical sealant at both faces of partitions at perimeters and through penetrations. Comply with ASTM C 919 and with manufacturer's written recommendations for locating edge trim and closing off sound-flanking paths around or through assemblies, including sealing partitions above acoustical ceilings.

### 3.3 Applying Interior Gypsum Board

- .1 Single-Layer Application:
  - .1 On ceilings, apply gypsum panels before wall/partition board application to greatest extent possible and at right angles to framing unless otherwise indicated.
  - .2 On partitions/walls, apply gypsum panels horizontally (perpendicular to framing) unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.
    - .1 Stagger abutting end joints not less than one framing member in alternate courses of panels.
    - .2 At stairwells and other high walls, install panels horizontally unless otherwise indicated or required by fire-resistance-rated assembly.
  - .3 On Z-furring members, apply gypsum

panels vertically (parallel to framing) with no end joints. Locate edge joints over furring members.

- .4 Fastening Methods: Apply gypsum panels to supports with steel drill screws.

#### 3.4 Installing Trim Accessories

- .1 General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.
- .2 Control Joints: Install control joints according to ASTM C 840 and in specific locations approved by Departmental Representative for visual effect.
- .3 Interior Trim: Install in the following locations:
  - .1 Cornerbead: Use at outside corners.
- .4 Install wall end cap where gypsum board partition intersects with window mullion.

#### 3.5 Finishing Gypsum Board

- .1 General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.
- .2 Prefill open joints, rounded or bevelled edges, and damaged surface areas.
- .3 Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.
- .4 Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C 840:
  - .1 Level 1: Ceiling plenum areas, concealed areas, and where indicated.
  - .2 Level 2: Panels that are substrate for tile.
  - .3 Level 3: Panels that are substrates

- for epoxy wall coatings.
- .4 Level 4: At panel surfaces that will be exposed to view unless otherwise indicated.
    - .1 Primer and its application to surfaces are specified in other Division 09 Section *Interior Painting*.
  - .5 Level 5: At surfaces in non-M&E Rooms that are scheduled for a semi-gloss or high-gloss paint finish, and in other locations indicated on Drawings.
    - .1 Primer and its application to surfaces are specified in other Division 09 Section *Interior Painting*.
    - .2 If drawings do not indicate the required paint gloss level then assume, for pricing purposes, that a Level 5 finish will not be required.

### 3.6 Protection

- .1 Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.
- .2 Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.
- .3 Remove and replace panels that are wet, moisture damaged, and mould damaged.
  - .1 Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
  - .2 Indications that panels are mould damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.