

SECTION 09255

EXTERIOR SHEATHING

PART 1 - GENERAL

1.1 SUMMARY

- A. **This Section includes the following:**
 - 1. Exterior sheathing board, vertical and horizontal applications.
- B. **Related work specified elsewhere:**
 - 1. Section 04200 - Unit masonry.
 - 2. Section 05400 - Cold-formed metal framing.
 - 3. Section 06100 - Rough carpentry: Exterior plywood sheathing at roof transitions.
 - 4. Section 07272 - Vapor Permeable, Fluid-Applied Membrane Air Barriers: Weather-resistant barrier installed over sheathing.
 - 5. Section 07410 - Prefinished Insulated Metal Panel System
 - 6. Section 07412 - Metal Wall Panels
 - 7. Section 07415 - Composite Metal Panel System
 - 8. Section 07620 - Sheet Metal Flashing and Trim
 - 9. Section 07920 - Joint Sealants

1.2 DEFINITIONS AND REFERENCES

- A. **Gypsum Board Construction Terminology Standard:** Refer to ASTM C 11 for definitions of terms for gypsum sheathing board construction not defined in this Section or in other referenced standards.
- B. **Comply with ASTM C 79 and ASTM C1177.**

1.3 SUBMITTALS

- A. **Product Data:** Submit manufacturer's descriptive literature indicating material composition, thickness, sizes and fire resistance.
- B. **Certificates:** Submit manufacturer's written certification that product meets specified requirements.

1.4 DELIVERY, STORAGE AND HANDLING

- A. **Delivery:** Deliver materials to the job site in manufacturer's original packaging, containers and bundles with manufacturer's brand name and identification intact and legible.
- B. **Storage and handling:** Store level and handle materials to protect against contact with damp and wet surfaces, exposure to weather, breakage and damage to edges. Provide air circulation under covering and around stacks of materials. Protect against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, or other causes. Stack sheathing flat on leveled supports off the ground, under cover, and fully protected from weather.
 - 1. Do not leave exposed to weather for more than 30 days when unprotected or for more than 180 days when protected

1.5 LIMITATIONS

- A. Do not use sheathing as a base for nailing or mechanical fastening. Fasteners shall be flush to the face of the board, not countersunk.
- B. When sheathing panels are used in slanted wall applications, that portion of the wall must be temporarily protected from the elements by the use of a temporary weather barrier such as #15 felt prior to application of the waterproofing. Also, exposed wall ends such as may be found in parapets must be covered to prevent water from infiltrating the cavity.

1.6 WARRANTY

- A. **Materials Warranty:** Provide sheathing manufacturer's standard warranty covering sheathing materials for five years commencing from date of Substantial Completion.
- B. **Weathering Warranty:** Provide sheathing manufacturer's standard warranty covering in-place exposure damage to sheathing for six months commencing on date of purchase by contractor.

PART 2 - PRODUCTS

2.1 SHEATHING BOARD

- A. **Glass-Mat Gypsum Wall Sheathing:** ASTM C 1177/1177M
- B. **Acceptable Products, Horizontal Applications (for Modified bitumen roofing):**
 - 1. Georgia Pacific - "DENS-DECK" sheathing, 5/8".
 - 2. Characteristics: Horizontal Sheathing
 - a. Size:
 - 1) Sheathing: 5/8" thick by 4' by 8', 9' or 10'; square ends.
 - b. Composition:
 - 1) Sheathing manufactured in accordance with ASTM C 1177 with water-resistant treated core.
 - c. Fire resistance:
 - 1) 5/8" sheathing: Flame spread 5, smoke developed 0, when tested in accordance with ASTM E 84.
- C. **Acceptable Products Vertical Applications:**
 - 1. Georgia Pacific - "5/8" DENS-GLASS GOLD" sheathing.
 - 2. USG - "5/8" AQUATOUGH FIBEROCK" sheathing.
 - 3. BPB - "5/8" GLASROC" sheathing

2.2 ACCESSORIES

- A. **Sheathing tape:** Tape specifically designed and manufactured to seal joints in sheathing against water and air infiltration, formulated with an adhesive that permanently bonds to sheathing substrates, minimum 2" wide, 10x10 glass mesh tape.
- B. **Joint compound:** Setting-type joint compound adhesive that permanently bonds to sheathing.

- C. **Sheathing fasteners:** Fasteners: Steel drill screws, in length recommended by sheathing manufacturer for thickness of sheathing board to be attached, with organic-polymer or other corrosion-protective coating having a salt-spray resistance of more than 800 hours according to ASTM B 117.
 - 1. For steel framing from 0.033 to 0.112 inch (0.84 to 2.84 mm) thick, attach sheathing with drill screws complying with ASTM C 954, a minimum of 1-1/4 inches (32 mm.) long,
- D. **Sealants, caulk and tape** (as required by manufacturer):
 - 1. Dow Corning 795 or equivalent;
 - 2. Pecora 895 or equivalent.
 - 3. Borden HPPG Elmers Siliconized Acrylic Latex Caulk or equivalent;
 - 4. Pecora AC-20 acrylic latex sealant;
 - 5. GE Silicone Silpruf Sealant;
 - 6. Tremco Dymonic
 - 7. "Blue Skin"
 - 8. 2" wide 10 x 10 glass mesh Quick Tape or equivalent

PART 3 - EXECUTION

3.1 PREPARATION

- A. Examine subframing; verify that surface of framing and furring members to receive sheathing does not vary more than 1/4" from the place of faces of adjacent members.

3.2 SHEATHING

- A. **Provide sheathing** where indicated on drawings. Install sheathing in accordance with manufacturer's instructions and applicable instructions in GA-253 and ASTM C 1280.
- B. **Use maximum lengths** possible to minimize number of joints.
- C. **Cut boards** at penetrations, edges, and other obstructions of work; fit tightly against abutting construction, unless otherwise indicated.
- D. **Coordinate** sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed exterior wall assembly.
- E. **Metal framing:** Attach sheathing to metal framing with screws spaced 8" o.c. and set back a minimum of 3/8 inch from edges and ends of boards; and fasten along intermediate framing in field as required by manufacturer.
- F. **Drive fasteners** to bear tight against and flush with surface of sheathing. Do not countersink. Apply fasteners so screw heads bear tightly against face of sheathing boards but do not cut into facing.
- G. **Do not bridge** building expansion joints with sheathing; cut and space edges to match spacing of structural support elements.
- H. **Horizontal Installation:** For tongue and groove sheathing, install sheathing with V-grooved edge down and tongue edge up. Interlock tongue with groove to bring long edges in contact with edges of adjacent boards without forcing. Abut ends of boards over centers of studs, and stagger end joints of adjacent boards not less than one stud spacing. Attach boards at perimeter and within field of board to each steel stud.

1. Space fasteners approximately 8 inches (200 mm) o.c. and set back a minimum of 3/8 inch (9.5 mm) from edges and ends of boards.
- I. **Vertical Installation:** Install board vertical edges centered over flanges of steel studs. Abut ends and edges of each board with those of adjacent boards. Screw-attach boards at perimeter and within field of board to each steel stud.
 1. Space fasteners approximately 8 inches (200 mm) o.c. and set back a minimum of 3/8 inch (9.5 mm) from edges and ends of boards.
- J. **Sealing Sheathing Joints:** Seal joints according to sheathing manufacturer's written recommendations, coordinate with self-adhered sheet waterproofing installation.
 1. If required apply glass-fiber sheathing tape to glass-mat gypsum sheathing board joints, and apply and trowel silicone emulsion sealant to embed sealant in entire face of tape.
 2. Apply sealant to exposed fasteners with a trowel so fasteners are completely covered. Seal other penetrations and openings.
- K. **Locate fasteners** minimum 3/8" from edges and ends of sheathing panels.
- L. **Self Adhering Sheet Waterproofing:** Install sheet waterproofing with flashing around openings.

3.3 SHEATHING JOINT-AND-PENETRATION TREATMENT

- A. **Seal and finish sheathing joints** as necessary for warranty (if required by manufacturer) according to sheathing manufacturer's written recommendations and instructions.
 1. Apply elastomeric sealant on joints and fasteners and trowel flat. Apply sufficient quantity of sealant to completely cover joints and fasteners after troweling. Seal other penetrations and openings.
 2. Apply glass-fiber sheathing tape to glass-mat gypsum sheathing board joints, and apply and trowel silicone emulsion sealant to embed sealant in entire face of tape. Apply sealant to exposed fasteners with a trowel so fasteners are completely covered. Seal other penetrations and openings.
- B. **Coordinate Installation of self-adhering sheet waterproofing** with waterproofing manufacturer's written recommendations and instructions.
 1. Verify materials used are compatible with waterproofing materials and comply with waterproofing manufacturer's written recommendations and instructions so as to maintain waterproofing manufacturer's and installer's guaranty/warranty.

3.4 REPAIRS AND PROTECTION

- A. **Protect exterior sheathing** that will be exposed to weather for more than 30 days by covering exposed exterior surface of sheathing with a securely fastened air-infiltration barrier. Apply covering immediately after sheathing is installed.
- B. **Protect cutouts, corners, and joints** in sheathing by filling with a flexible sealant or by applying tape recommended by sheathing manufacturer at time sheathing is applied.

END OF SECTION