

SECTION 06 16 00

POLYISOCYANURATE STRUCTURAL SHEATHING BOARD

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Polyisocyanurate backer board with coated glass mat facers.

1.2 RELATED WORK

- A. The following items are not included in this Section and are specified under the designated Sections:

1. Section 05 40 00 - COLD-FORMED METAL FRAMING: Light Gauge Metal Framing.
2. Section 06 10 00 - ROUGH CARPENTRY: Wood framing.
3. Section 06 12 00 – Structural Panels
4. Section 06 12 19 – Shear Wall Panels
5. Section 07 21 00 – Thermal Insulation
6. Section 07 25 00 – Water Resistive Barriers / Weather Barriers

1.3 REFERENCES

- A. Standards and Referenced Documents:

1. AISI S100: North American Specification for the Design of Cold-Formed Steel Structural Members
2. AISI S213: North American Specification for Cold-Formed Steel Framing – Lateral Design
3. ANSI/AWC SDPWS: Special Design Provisions for Wind and Seismic
4. ASCE/SEI 7: Minimum Design Loads and Associated Criteria for Buildings and Other Structures
5. ASTM C1289: Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board
6. ASTM C518: Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
7. ASTM E2394: Standard Test Methods for Simulated Service Testing of Wood and Wood-Based Finished Flooring.
8. ASTM E2126: Standard Test Methods for Cyclic (Reversed) Load Test for Shear Resistance of Vertical Elements of the Lateral Force Resisting Systems for Buildings
9. ASTM E2178: Standard Test Method for Air Permeance of Building Materials.
10. ASTM E330: Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference.
11. ASTM E 331: Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference.
12. ASTM E72: Standard Test Methods of Conducting Strength Test of Panels for Building Construction.
13. ASTM E 84: Standard Test Method for Surface Burning Characteristics of Building Materials.
14. ASTM E 96: Standard Test Methods for Water Vapor Transmission of Materials.
15. SBCA ANSI/FS 100: Standard Requirements for Wind Pressure Resistance of Foam Plastic Insulating Sheathing Used in Exterior Wall Covering Assemblies.
16. ANSIA 118.10 – American National Standard Specification for Load Bearing, Bonded, Waterproof Membranes for Thin-set Ceramic Tile and Dimension Stone

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's data sheets on each product to be used, including:

Johns Manville GoBoard Structural Sheathing
Guide Specifications in CSI Format

1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Installation methods.

B. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.

C. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Minimum of 2 years of experience with installation of similar products.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging, clearly marked with the manufacturer's name, brand name, product identification, type of material, safety information, manufacture date, and lot numbers until ready for installation.

1.7 Store boards flat on a smooth level surface. Protect edges and corners from chipping. Store sheets under cover and keep dry prior to installing.

1.8 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.9 WARRANTY

A. Product Warranty: limited product warranty against manufacturing defects:

1. GoBoard 5/8 inch nominal fiber board for 10 years.
2. GoBoard 1 inch nominal fiber board for 10 years.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis-of-Design: **GoBoard Structural Sheathing** by Johns Manville, 717 17th Street, Denver, CO 80202. Tel (800) 654-3103. www.JM.com.

B. Substitutions: Not permitted

C. Requests for approval of equal substitutions will be considered in accordance with provisions of Section 01 60 00

2.2 POLYISOCYANURATE STRUCTURAL SHEATHING BOARD

A. Material shall meet the following performance standards:

1. Board shall have a flame spread index of less than 25 and a smoke developed index of less than 450 when tested in accordance with ASTM E 84 for 5/8" GoBoard Sheathing.
2. Board shall have a flame spread index of less than 75 and a smoke developed index of less than 450 when tested in accordance with ASTM E 84 for 1" GoBoard Sheathing.
3. Board shall have a water vapor permeability of less than 1 when tested in accordance with ASTM E 96.
4. Board shall meet the requirements of ASTM D 4068, G 21, and G 22.
5. Board shall have a PSI of 200, minimum for 5/8" GoBoard Sheathing.
6. Board shall have a PSI of 125, minimum for 1" GoBoard Sheathing.

Johns Manville GoBoard Structural Sheathing
Guide Specifications in CSI Format

B. Basis of Design Product: Johns Manville GoBoard (www.JM.com/GoBoard)

1. Thickness:

- a. 5/8"
- b. 1"

2. Standard Sheet Size:

- a. 4'x8'
- b. 4'x9'

2.3 ACCESSORIES

A. Fasteners:

- 1. Wood framing: GoBoard HiLo Fasteners (1-1/4" long or 1-5/8" long), or 1-1/4" GoBoard Washer with 1-5/8" HiLo Fasteners for wood studs, or 1" crown 16 gauge galvanized staples for wood studs with a minimum 5/8" embedment. Refer to TER 1811-01 at www.drjcertification.org for structural capacities.
- 2. Steel framing: GoBoard Self-Drilling Fastener for Steel Studs (1-1/4" long or 1-5/8" long), or 1-1/4" GoBoard Washer with 1-5/8" Self-Drilling Fasteners for steel studs. Refer to TER 1811-01 at www.drjcertification.org for structural capacities.

B. Bonding: GoBoard Pro Sealant – 1/4" Bead of Sealant onto stud prior to fastening board.

C. Joint Sealing:

- 1. GoBoard Pro Sealant
- 2. GoBoard Seam Tape

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If framing or substrate preparation is the responsibility of another installer, notify Architect or design professional of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions. Refer to TER 1811-01 at www.drjcertification.org or www.jm.com/goboardstructuralsheathing for structural capacities and fastening patterns.
- B. All framing should comply with local building code requirements.
- C. Steel Frame Walls:

1. Framing members shall be spaced at **16" (24")** on center maximum and shall be a minimum 20 ga.(33 ksi) 1-5/8" x 3-5/8" steel studs.
2. Studs shall be furred out flush with receptors and GoBoard edges should be continuously supported.
3. Stagger all GoBoard Sheathing board joints.
4. GoBoard 1" sheathing shall be adhered to the studs with GoBoard Pro Sealant (minimum 1/4" thick bead) along the length of each stud.
5. Fasteners shall be installed with the head in contact with the face of the board. Fastener edge shall be a minimum of 3/8" on all sides of the board.
6. Seal all joints and fastener penetrations per manufacturer instructions.
7. Seal GoBoard Joints and Penetrations with GoBoard Seam Tape.
8. Embed GoBoard Seam Tape to GoBoard Surfaces over joints with a dull plastic squeegee or GoBoard Putty Knife with care.
9. Overlap all GoBoard Seam Tape joints at a minimum of 1".
10. Install GoBoard Sheathing with an 1/8" gap between boards on all sides and fill with GoBoard Pro Sealant.
11. A minimum 2" wide strip of GoBoard Pro Sealant shall cover each joint (min. 1" of GoBoard Pro sealant on each side of the joint).
12. For wall with steel studs and gypsum wallboard, the gypsum wall board shall be attached with minimum #6 x 1-1/4" Type S screws. Fasteners shall maintain a minimum edge distance of 3/8" and spaced at 8" on center along the edges and in the field.
13. Where gypsum wallboard is not installed on the interior face of the wall, the wall shall be constructed with mid-height strapping and blocking per structural engineers design to meet IRC Section R603.3.3.
14. Refer to TER 1811-01 at www.drjcertification.org or www.im.com/goboardstructuralsheating

D. Wood Framed Walls:

1. Framing members shall be spaced a maximum of 16" on center and must be designed for a maximum allowable assembly deflection of L/360 (L/720 for stone) under all intended live loads.
2. Stagger all board joints.
3. Fasteners shall be installed with the head in contact with the face of the board. Fastener edge shall be a minimum of 3/8" on all sides of the board.
4. Seal all joints and fastener penetrations per manufacturer instructions.
5. Seal GoBoard Joints and Penetrations with GoBoard Seam Tape.
6. Embed GoBoard Seam Tape to GoBoard Surfaces over joints with a dull plastic squeegee or GoBoard Putty Knife with care.
7. Overlap all GoBoard Seam Tape joints at a minimum of 1".
8. Install GoBoard Sheathing with an 1/8" gap between boards on all sides and fill with GoBoard Pro Sealant.
9. A minimum 2" wide strip of GoBoard Pro Sealant shall cover each joint (min. 1" of GoBoard Pro sealant on each side of the joint).
10. For wall with wood studs and gypsum wallboard, the gypsum wall board shall be attached with minimum #6 x 1-1/4" Type S screws. Fasteners shall maintain a minimum edge distance of 3/8" and spaced at 8" on center along the edges and in the field.
11. Where gypsum wallboard is not installed on the interior face of the wall, the wall shall be constructed with mid-height strapping and blocking per structural engineers design to meet IRC Section R603.3.3.
12. Refer to TER 1811-01 at www.drjcertification.org or www.im.com/goboardstructuralsheating

3.4 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION