

# DensElement® Barrier System Provided by Georgia-Pacific Gypsum LLC

## Drop In Specification Language for Section 06 16 56 - Gypsum Sheathing – Integrated Vapor-Permeable Water-Resistive Barrier and Air-Barrier

*(Specifier Note: The purpose of this guide specification language is to assist the specifier in correctly specifying fire-resistance rated gypsum board products and their installation. The specifier needs to edit these guide specifications to fit the needs of each specific project. Contact Georgia-Pacific Gypsum LLC to assist in appropriate product selections.*

*Georgia-Pacific Gypsum LLC is the exclusive service provider of DensElement® Barrier System and DensDefy® Products.*

*The language provided is not adequate as a complete stand-alone specification section. Recommended section numbers and titles where this information may be included: **Section 06 16 43 – Sheathing** or **Section 09 21 16 - Gypsum Board Assemblies** or **Section 09 29 00 Gypsum Board**. Language that the specifier may elect to include in each of the 3-Parts has been provided. Article numbering is only for navigating this document and language should be incorporated into the appropriate Article heading in the desired section.*

*Specifier Notes included in (italicized red text) are included to provide assistance in selecting appropriate text for inclusion in a Specification. [Bold text] indicates a selection is required. Text in the brackets may not be the only options available but are recommended or common selections.)*

### PART 1 - GENERAL *(no special language is required in Part 1 for this product)*

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURER/PRODUCTS

- A. Air-Barrier and Water-Resistive Glass-Mat Gypsum Sheathing: ASTM C1177/C1177M, Type X, fiberglass mat gypsum sheathing with integral weather-resistant barrier and air barrier complying with ASTM E2178 and ICC-ES AC 212.
1. Basis-of-Design Product: Subject to compliance with requirements, provide Georgia-Pacific Gypsum LLC; DensElement Barrier System
  2. Thickness: **5/8 inch (15.9 mm)** thick.
  3. Board Type: Type X.
  4. Size: **48 by 96 inches (1219 by 2438 mm)** for vertical and horizontal installation.
  5. Air- and Water-Resistive Flashing Thickness: Minimum **16-mil (0.41-mm)** wet film thickness.
  6. Edges: Square.
  7. Flashing and Transition Strips: As acceptable to sheathing manufacturer.
  8. Air Permeance: Maximum **0.004 cfm/sq. ft. (0.2 L/s x sq. m)** pressure difference when tested in accordance with ASTM E2178.
  9. Vapor Permeance: Minimum [**25 perms (1436 ng/Pa x s x sq. m)**] [**30 perms (1724 ng/Pa x s x sq. m)**] when tested in accordance with ASTM E96/E96M, Water Method, Procedure B.

10. Sheathing Assembly Air Leakage: Maximum [0.04 cfm/sq. ft. of surface area at 1.57 lbf/sq. ft. (0.2 L/s x sq. m of surface area at 75 Pa)] <Insert value> when tested in accordance with ASTM E2357.
11. Fire Propagation Characteristics: Complies with NFPA 285 testing as part of an approved assembly.
12. Combustion Characteristics; ASTM E84: Class A.
13. Board Product Antifungal Properties; ASTM D3273: zero defacement.
14. VOC Content - Fluid-Applied Flashing: 50 g/L or less.
15. UV and Weathering Resistance: Can be exposed to normal weather conditions for 12 months in accordance with manufacturer's written instructions.
16. Air Barrier Accessory Materials
  1. Fluid applied flashing for joints, inside and outside corners, material transitions, board to board seams, wall to slab, and penetrations
    - a. DensDefy® Liquid Flashing - a waterproofing and detailing compound made with STP chemistry
  2. Self-Adhering transition membrane for flashing of rough openings, material transitions, and wall to slab
    - a. DensDefy® Transition Membrane - 25-mil composite impermeable membrane that is comprised of 16 mils of butyl adhesive and 9 mils of HDPP facer.
  3. Fluid-Applied air barrier water-resistive barrier for treatment of glass-mat sheathing, concrete, Concrete Masonry Units (CMU), OSB and Plywood.
    - a. DensDefy™ Liquid Barrier - single component Silyl-Terminated Polymer (STP) air and water-resistive barrier applied by roller or with spray equipment applied at a minimum of 14 wet mils or CMU surfaces.

**PART 3 - EXECUTION** *(COORDINATE Preparation and Installation requirements with the prescribed exterior building envelope assembly.)*

**DISCLAIMER:**

*Georgia-Pacific Gypsum LLC is the exclusive service provider of DensElement® Barrier System and DensDefy® Products. Guide Specifications have been written as an aid to the professionally qualified specifier and design professional. The use of this information requires the professional judgment and expertise of the qualified specifier and design professional to adapt the information to the specific needs of the building Owner and the project; to coordinate with the design professional's construction document process, and to meet the applicable building codes, regulations and laws. Georgia-Pacific Gypsum LLC on behalf of itself and the entities specified above, disclaims any warranty, express or implied, including the warranty of fitness for a particular purpose, of any product identified in the Guide Specifications.*

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