



# Air and Vapor Barrier 3015 Building Envelope Solutions NFPA® 285 Wall Assemblies

Technical Bulletin 3015-0005

October 2017

Section 2603.5.5 of the International Building Code (2006, 2009 and 2012 editions) requires that exterior wall systems that incorporate foam plastic insulation shall meet the requirements of NFPA® 285, “Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load Bearing Wall Assemblies Containing Combustible Components”.

Additionally, Section 1403.5 of the International Building Code (2012 edition) requires that exterior walls systems greater than 40 feet above grade plane on buildings of Type I, II, III or IV construction that incorporate combustible water-resistive barriers shall also meet the requirements of NFPA® 285.

3M has performed NFPA® 285 fire tests on a number of exterior wall system assemblies that incorporate 3M™ Air and Vapor Barrier 3015 as the weather resistive barrier (WRB) applied to the base wall. The summary of wall components that have been determined to meet the performance requirements of NFPA® 285 is listed below in Table 1.

Table 1 – Walls with 3M™ Air and Vapor Barrier 3015

Wall Component	Materials
Base Wall System – Use either 1, 2, 3 or 4	1 – Concrete Wall. 2 – Concrete Masonry Wall. 3 – Standard clay brick wall without other combustible materials. 4 – Steel Stud Framed Wall (24" o.c. max.) – Minimum 20-gauge, 3- <sup>5</sup> / <sub>8</sub> " studs, with lateral bracing every 4 ft. vertically, with a minimum of 1 layer of <sup>5</sup> / <sub>8</sub> " Type X gypsum wallboard on the interior face of studs.
Floorline Firestopping	With base wall system No. 4 above, 4 lb/ft <sup>3</sup> mineral wool in each stud cavity and at each floorline – friction fit or attached with Z-clips or equivalent.
Cavity Insulation – Use either 1, 2 or 3	1 – None. 2 – Any noncombustible insulation (faced or unfaced). 3 – Any noncombustible Icynene spray foam.
Exterior Sheathing – Use either 1 or 2	1 – 1/2 inch thick, exterior type gypsum sheathing. 2 – <sup>5</sup> / <sub>8</sub> inch thick, Type X, exterior type gypsum sheathing.
Weather resistive barrier applied to exterior sheathing	3M™ Air and Vapor Barrier 3015 Note: Air/Vapor barrier to be installed in accordance with manufacturers recommended installation instructions. As an option, use 3M™ Scotch-Weld™ HoldFast 70 spray adhesive to provide temporary attachment of the exterior insulation.
Exterior Insulation – Use either 1 or 2	1 – Dow Thermax™ Brand Rigid Insulation – total thickness to be a minimum <sup>5</sup> / <sub>8</sub> inch to a maximum 3 inch thickness. 2 – Hunter Panels Xci CG Insulation – total thickness to be a minimum of <sup>5</sup> / <sub>8</sub> inch to a maximum of 3.5 inch thickness.

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Table 1 – Walls with 3M™ Air and Vapor Barrier 3015 (continued)

Wall Component	Materials
Flashing of exterior insulation joints	<p>Optional – Flash all exterior insulation joints and veneer tie penetrations with acrylic, asphalt or butyl-based flashing tape or equivalent – maximum 4 inch wide (AAMA 711 or ICC-ES AC 148 complying).</p> <p>NOTE: Optional – Spray primer to aid in adhesion applied at a maximum of 5 inches wide.</p>
Exterior Veneer – Use either 1, 2, 3, 4, 5, 6, 7, 8, 9, or 10	<p>1 – Brick – Brick veneer anchors – standard types – installed maximum 24 inches o.c. vertically on each stud.</p> <ul style="list-style-type: none"> <li>– Maximum 2-inch air gap between exterior insulation and brick,</li> <li>– Standard nominal 4-inch thick, clay brick</li> </ul> <p>2 – Stucco – Minimum <math>\frac{3}{4}</math> inch thick, exterior cement plaster and lath. A secondary water-resistive barrier can be installed between the exterior insulation and the lath. The secondary water-resistive barrier shall not be full coverage asphalt or butyl-based self-adhered membranes.</p> <p>3 – Stone veneer – Minimum 2-inch thick, Limestone or natural stone veneer or minimum 1-<math>\frac{1}{2}</math> inch thick cast artificial stone veneer. Any standard installation technique can be used.</p> <p>4 – Terracotta cladding – Use any terracotta cladding system in which terracotta is minimum 1-<math>\frac{1}{4}</math> inch thick. Any standard installation technique can be used.</p> <p>5 – Metal veneer such as steel, aluminum, copper, etc. Any standard installation technique can be used.</p> <p>6 – Fiber cement siding or fiber cement panels – Any standard installation technique can be used.</p> <p>7 – MCM System – Use any Metal Composite Panel that has been successfully tested by the panel manufacturer via NFPA® 285 test method.</p> <p>8 – Concrete Masonry Units (CMU) – Minimum 4 inch thick CMU, with 2 inch maximum air gap between exterior insulation and CMU.</p> <p>9 – Concrete Panels – Minimum 2 inch thick panel, with a 2 inch maximum air gap between exterior insulation and concrete panel.</p> <p>10 – Insulated Concrete Sandwich Panels – Minimum 2-inch thick outer and inner faces. Maximum 2 inch air gap between inner face and wall system.</p> <p>NOTE: All exterior veneer/cladding system must be installed in accordance with manufacturers recommended installation instructions and with applicable building codes.</p>
Flashing of window, door and other exterior wall penetrations	<p>As an option, flash window, door and other exterior penetrations with limited amounts of asphalt, acrylic or butyl-based flashing tape – maximum 12 inch width.</p>

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For Additional Information

For additional information, please contact 1-800-362-3550.

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