Structural Fire Resistance
ASTM E119

ASTM E119

ASTM E119, Standard Test Methods for Fire Tests of Building Construction and Materials, evaluates the duration for which building elements such as the CavityComplete® Wood Stud with Masonry Veneer Wall System will contain a fire and retain its structural integrity during a fire test exposure. The test exposes a wall assembly to a controlled time/temperature fire exposure for a specified time period. The timed fire exposure is followed by the application of a fire hose stream to evaluate the ability of the fire weakened assembly to withstand both the thermal shock of a sudden cold water stream, and its retained structural integrity. The test standard measures the transmission of heat and hot gases through the wall assembly. For load bearing walls the standard also measures the load carrying ability of the wall assembly during the test exposure.

Types of Construction and Fire Resistance Ratings
The International Building Code (IBC), Section 602, identifies building construction classifications. Some classifications require exterior wall fire resistance ratings of 1, 2 or 3 hours depending on building characteristics, including use and occupancy classification, height and area, fire separation distances, and other details. Wood frame construction (Type V) may be permitted with 0 hour rating, and generally requires no more than a 1 hour fire resistance rating on the exterior wall.

Testing Fire Resistance Ratings
IBC Section 703 specifies that the fire resistance rating of building walls be determined in accordance with one of several alternative methods including ASTM E119 testing or engineering analysis (Section 703.3.4).

CavityComplete® Wall System Fire Resistance Rating
The CavityComplete® Wood Stud with Masonry Veneer Wall System is one hour fire resistance rated for either interior or exterior fire exposure. See the table for additional details, and Underwriters Laboratories OnLine Certifications Directory, Fire Resistance Rated Design No. V317 for complete UL specifications.

Extruded Polystyrene (XPS) Insulation

<table>
<thead>
<tr>
<th>Extruded Polystyrene (XPS) Insulation</th>
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<tbody>
<tr>
<td>Exterior Fire Rating 1 hour</td>
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<tr>
<td>Interior Fire Rating 1 hour</td>
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<tr>
<td>Structural Bearing</td>
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<tr>
<td>Wood Stud Spacing 16&quot; max. oc.</td>
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<tr>
<td>Wood Stud 2 x 4 (nominal)</td>
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<tr>
<td>Interior Gypsum Board 5/8&quot;, type X</td>
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<tr>
<td>Batt Insulation EcoTouch® Fiberglas, faced or unlaced</td>
</tr>
<tr>
<td>Exterior Gypsum Board or Wood Structural Sheathing Nominal 1/2&quot; structural wood panel, or, 5/8&quot; exterior grade gypsum board</td>
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<tr>
<td>Air/Water Resistant Barrier PROSOCO R-Guard® Cat-5®</td>
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<tr>
<td>Continuous Insulation 4&quot; max., FOAMULAR® 250 XPS</td>
</tr>
<tr>
<td>Air/Water Sealing Washers Thermal-Grip®</td>
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<tr>
<td>Air Space Varies 1” to 2”</td>
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<tr>
<td>Mortar Drippings Protection MortarNet®</td>
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<tr>
<td>Through Wall Flashing TotalFlash®</td>
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<tr>
<td>Masonry Anchor Pos-I-Tie® with ThermalClip®</td>
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<tr>
<td>Masonry Anchor Spacing 24&quot; max.*</td>
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<tr>
<td>Exterior Finish 4&quot; face brick (nominal)</td>
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* Building code requirements for brick support may differ. See UL online certifications directory Design No. V317 for complete details. See additional system details on Page 3.

References
1. ASTM E 119-12a, Standard Test Methods for Fire Tests of Building Construction and Materials; ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959

Thermal Guard® RainBarrier
Mineral Wool/Thermafiber
Owens Corning®

R-Guard® Joint
& Seam Filler
Thermal-Grip® Brick-Tie Washers
Rodenhouse, Inc.

WeepVent™
Mortar Net Solutions™

TotalFlash™
Rigid Foam Insulation
Owens Corning®

MortarNet®
Mortar Droppings Protection
Mortar Net Solutions™

BTL-1™
Sealant
Mortar Net Solutions™

Grip-Deck™
Screw with Thermal-Grip® ci Prong Washers
Rodenhouse, Inc.

Pos-I-Tie®
Masonry Veneer Anchoring System, with ThermalClip®
Heckmann Building Products, Inc.

R-Guard® CAT 5®
Air and Waterproof Barrier
PROSOCO®

R-Guard® FastFlash®
Liquid Flashing Membrane
PROSOCO®

EcoTouch® Pink® FIBERGLAS™ Insulation
Faced or Unfaced Board
Owens Corning®

R-Guard® Joint
& Seam Filler
Thermal-Grip® Brick-Tie Washers
Rodenhouse, Inc.

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Mortar Net Solutions™

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CavityComplete® Wood Stud, Wall Section with Extruded Polystyrene (XPS) Insulation

CavityComplete® Wood Stud, Base of Wall Section with Extruded Polystyrene (XPS) Insulation


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