

WALL ASSEMBLY GUIDE



NFPA 285

Per Chapter 26 of the International Building Code, the wall assembly shall be tested in accordance with and comply with the acceptance criteria of NFPA 285. The listed assemblies in this document have met that criteria.

FOAMSULATE SPRAY FOAM INSULATION AS THE CAVITY INSULATION	
<p>BASE WALL SYSTEM</p> <p>Use item 1, 2, or 3</p>	<ol style="list-style-type: none"> Concrete Wall Concrete Masonry Wall Steel Stud Wall – 1-layer 5/8 inch thick type X gypsum wallboard on the interior, installed on minimum 3 5/8 inch deep, 20-gauge steel studs, spaced a maximum of 24 inches on center
<p>FLOOR LINE FIRE STOPPING</p>	<p>4-inch 4 pcf mineral wool (friction fit or installed with Z-Clips)</p>
<p>CAVITY INSULATION</p> <p>Use item 1 or 2</p>	<ol style="list-style-type: none"> None Full stud cavity depth or less of Foamsulate 50-HY, Foamsulate 50, Foamsulate 70, Foamsulate OCX, Foamsulate Closed Cell, Foamsulate HFO
<p>EXTERIOR SHEATHING</p>	<p>Minimum 5/8 inch thick exterior-type gypsum sheathing</p>
<p>WEATHER RESISTANT BARRIER OVER BASE WALL</p> <p>Use item 1 or 2</p> <p>Note: Approvals from IAPMO, DrJ Engineering, ICC-ES, Intertek, UL, or other qualified 3rd parties may be used</p>	<ol style="list-style-type: none"> None Any WRB/AVB barrier that has been approved to be used in an NFPA 285 compliant assembly paired with mineral wool, polyisocyanurate, EPS or XPS insulation or no exterior insulation for claddings approved for that WRB. See note for approval agencies
<p>EXTERIOR INSULATION</p> <p>Use item 1, 2, or 3</p> <p>Note: Approvals from IAPMO, DrJ Engineering, ICC-ES, Intertek, UL, or other qualified 3rd parties may be used</p>	<ol style="list-style-type: none"> None – only where the cladding is listed to be approved with specific WRBs (see Note 1) 2-inch thick (min.) 4 pcf mineral fiber insulation allowed for use with any WRB on the base wall surface (see Note 1) Any polyisocyanurate, EPS or XPS insulation that has been approved (see note) to be used in an NFPA 285 compliant assembly paired with the WRBs in Item 2 above and claddings in Item 2 below (see Note 2)

EXTERIOR CLADDING

Use item 1 or 2

Note: Approvals from IAPMO, DrJ Engineering, ICC-ES, Intertek, UL, or other qualified 3rd parties may be used

1. Claddings below may only be used with noncombustible exterior insulation Item 2 above (mineral fiber)
 - a. Any noncombustible cladding, such as brick, stone, terra cotta, fiber cement, concrete, sheet metal, etc.
 - b. Combustible cladding – use any cladding that has been successfully tested by the panel manufacturer (or fabricator) via the NFPA 285 test method (see Note 2)
 2. Claddings below may be used with any approved (see note) combustible exterior insulation item 3 above. Any cladding (combustible or noncombustible) that has been approved to be used in an NFPA 285 compliant assembly paired with approved polyisocyanurate, EPS, XPS, or SPF insulation. Each insulation must be specifically approved for the exact cladding types listed in the approval (see Note 2)
- IMPORTANT: See the next item (Window/Door perimeter details for specific insulation types that require unique detailing

WINDOW/DOOR PERIMETERS

Must use approved design for specific system being considered (see note)

Note: EPS and XPS require specific door/window header and jamb details to be compliant with NFPA 285. Polyisocyanurate and SPF may or may not require specific header/jamb details. See approvals from IAPMO, DrJ Engineering, ICC-ES, Intertek, UL, or other qualified 3rd parties for the particular header/jamb detail required for each insulation type

Note 1: Examples for use with no exterior insulation or with mineral wool insulation per the table above

Cladding Lists 1 and 2 below are for use with no exterior insulation. However, this will expose the substrate to moisture, in which case a WRB must be added to the system. For these applications, WRBs approved for use with each cladding must be used

1. Any combustible cladding that has passed NFPA 285 testing (examples below)
 - a. NFPA 285 approved MCM/ACM Metal/Aluminum Composite building panels
 - b. NFPA 285 approved stone/aluminum honeycomb composite
 - c. NFPA 285 approved HPL High-Pressure Laminate Panels
2. Any noncombustible cladding such as (but not limited to)
 - a. **Brick** – Nominal 4-inch clay brick or veneer
 - b. **Stucco** – ¾ inch exterior cement plaster and lath. A secondary water-resistive barrier can be installed between the insulation and lath. The secondary WRB may not be full coverage asphalt or butyl based self-adhering membranes
 - c. **Natural Stone** (granite, limestone, marble, sandstone) – 2-inch thick
 - d. **Artificial Cast Stone** – 1½-inch thick
 - e. **Terra Cotta Cladding** – 1¼-inch thick
 - f. **¼-Inch Thick Glass Fiber-Reinforced Concrete Panels** (installed per manufacturer instructions)
 - g. **Concrete** – 2-inch-thick
 - h. **CMU blocks** – 4-inch-thick
 - i. **Sheet Metals** such as aluminum, copper or zinc – any thickness

Note 2: Combustible WRB/Insulation/Cladding

If the base wall is covered with a combustible WRB/Insulation and various claddings (combustible or noncombustible), each insulation/WRB/cladding combination allowed must have explicitly been tested or approved to be used with each other. Approvals from IAPMO, DrJ Engineering, ICC-ES, Intertek, UL, or other qualified 3rd parties may be used.