


Table 8-3 Typical insulation types used in masonry wall systems

| Insulation Product | Typical R-Value Use in Wall Assembly | Air Permeance Vapor Permanence | Moisture Tolerance | Installation Notes |
|--|---|---|--|--|
| Semi-Rigid Mineral Fiber  | approx. R-4.2 per inch Cavity (Wood Stud- Framed) & Exterior | Air-Permeable Class IV | Hydrophobic, tolerates moisture, and has free- draining capabilities. | The semi-rigid properties of this insulation facilitate a snug fit at board joints and around penetrations such as masonry anchors without requiring notching. |
| Rigid Extruded Polystyrene (XPS)  | R-5 per inch Interior & Exterior | Air-Impermeable* Class II | Moisture-resistant and suitable for wet environments. | Rigid board insulation may require notching around masonry anchors or other supports to create a snug fit. When multiple board layers are used, stagger board joints. |
| Rigid Polyisocyanurate  | R-5 to R-5.6 per inch Interior, Exterior, or Cavity | Air-Impermeable* Class I-Class III depending on the facer | Typically includes a foil or moisture-resistant facer. Uses a compatible tape at faced board joints to protect the insulation core from incidental moisture. | Rigid board insulation may require notching around masonry anchors or other supports to create a snug fit. When multiple board layers are used, stagger board joints. |
| Closed Cell Spray Foam  | R-5.5 to R-6.5 per inch Interior, Exterior, or Cavity | Air-Impermeable Class II at 2-inch thickness | Spray foam product should be rated for exterior use where used within the anchored masonry veneer air cavity. | Spray in place after framing, wall penetrations, and masonry anchors are in place. |
| Fiberglass Batt  | R-3.3 to R-3.7 per inch Cavity | Air-Permeable Class IV | Not moisture-tolerant; use in dry cavities only. | Size batt to fit snug in framing cavities and around penetration and building services. Do not compress batt. |

* With all rigid board joints and edges taped/sealed