

**TABLE 1404.2**  
**MINIMUM THICKNESS OF WEATHER COVERINGS**

| COVERING TYPE                                | MINIMUM THICKNESS<br>(inches) |
|--|-------------------------------|
| Adhered masonry veneer                       |                               |
| Architectural cast stone                     | 0.75                          |
| Other  | 0.25                          |
| Aluminum siding                              | 0.019                         |
| Anchored masonry veneer                      |                               |
| Stone (natural)                              | 2.0                           |
| Architectural cast stone                     | 1.25                          |
| Other  | 2.625                         |
| Asbestos-cement boards                       | 0.125                         |
| Asbestos shingles                            | 0.156                         |
| Cold-rolled copper <sup>d</sup>              | 0.0216 nominal                |
| Copper shingles <sup>d</sup>                 | 0.0162 nominal                |
| Exterior plywood (with sheathing)            | 0.313                         |
| Exterior plywood (without sheathing)         | See Section 2304.6            |
| Fiber cement lap siding                      | 0.25 <sup>c</sup>             |
| Fiber cement panel siding                    | 0.25 <sup>c</sup>             |
| Fiberboard siding                            | 0.5                           |
| Glass-fiber reinforced concrete panels       | 0.375                         |
| Hardboard siding <sup>c</sup>                | 0.25                          |
| High-yield copper <sup>d</sup>               | 0.0162 nominal                |
| Lead-coated copper <sup>d</sup>              | 0.0216 nominal                |
| Lead-coated high-yield copper                | 0.0162 nominal                |
| Marble slabs                                 | 1                             |
| Particleboard (with sheathing)               | See Section 2304.6            |
| Particleboard (without sheathing)            | See Section 2304.6            |
| Porcelain tile                               | 0.25                          |
| Steel (approved corrosion resistant)         | 0.0149                        |
| Structural glass                             | 0.344                         |
| Stucco or exterior cement plaster            |                               |
| Three-coat work over:                        |                               |
| Metal plaster base                           | 0.875 <sup>b</sup>            |
| Unit masonry                                 | 0.625 <sup>b</sup>            |
| Cast-in-place or precast concrete            | 0.625 <sup>b</sup>            |
| Two-coat work over:                          |                               |
| Unit masonry                                 | 0.5 <sup>b</sup>              |
| Cast-in-place or precast concrete            | 0.375 <sup>b</sup>            |
| Terra cotta (anchored)                       | 1                             |
| Terra cotta (adhered)                        | 0.25                          |
| Vinyl siding                                 | 0.035                         |
| Wood shingles                                | 0.375                         |
| Wood siding (without sheathing) <sup>a</sup> | 0.5                           |

For SI: 1 inch = 25.4 mm, 1 ounce = 28.35 g, 1 square foot = 0.093 m<sup>2</sup>.

a. Wood siding of thicknesses less than 0.5 inch shall be placed over sheathing that conforms to Section 2304.6.

b. Exclusive of texture.

c. As measured at the bottom of decorative grooves.

d. 16 ounces per square foot for cold-rolled copper and lead-coated copper, 12 ounces per square foot for copper shingles, high-yield copper and lead-coated high-yield copper.

**1404.3 Vapor retarders.** Vapor retarders as described in Section 1404.3.3 shall be provided in accordance with Sections 1404.3.1 and 1404.3.2, or an approved design using accepted engineering practice for hygrothermal analysis.

**1404.3.1 Class I and II vapor retarders.** Class I and II vapor retarders shall not be provided on the interior side of frame walls in Zones 1 and 2. Class I vapor retarders shall not be provided on the interior side of frame walls in Zones 3 and 4 other than Marine 4. Class I or II vapor retarders shall be provided on the interior side of frame walls in Zones 5, 6, 7, 8 and Marine 4. The appropriate zone shall be selected in accordance with Chapter 3 [CE] of the *International Energy Conservation Code-Commercial Provisions*.

**Exceptions:**

1. Basement walls.
2. Below-grade portion of any wall.
3. Construction where moisture or its freezing will not damage the materials.
4. Conditions where Class III vapor retarders are required in Section 1404.3.2.

**1404.3.2 Class III vapor retarders.** Class III vapor retarders shall be permitted where any one of the conditions in Table 1404.3.2 is met. Only Class III vapor retarders shall be used on the interior side of frame walls where foam plastic insulating sheathing with a perm rating of less than 1 is applied in accordance with Table 1404.3.2 on the exterior side of the frame wall.

**TABLE 1404.3.2**  
**CLASS III VAPOR RETARDERS**

| ZONE     | CLASS III VAPOR RETARDERS PERMITTED FOR: <sup>a</sup>  |
|----------|--|
| Marine 4 | Vented cladding over wood structural panels<br>Vented cladding over fiberboard<br>Vented cladding over gypsum<br>Continuous insulation with $R$ -value $\geq R2.5$ over $2 \times 4$ wall<br>Continuous insulation with $R$ -value $\geq R3.75$ over $2 \times 6$ wall |
| 5        | Vented cladding over wood structural panels<br>Vented cladding over fiberboard<br>Vented cladding over gypsum<br>Continuous insulation with $R$ -value $\geq R5$ over $2 \times 4$ wall<br>Continuous insulation with $R$ -value $\geq R7.5$ over $2 \times 6$ wall    |
| 6        | Vented cladding over fiberboard<br>Vented cladding over gypsum<br>Continuous insulation with $R$ -value $\geq R7.5$ over $2 \times 4$ wall<br>Continuous insulation with $R$ -value $\geq R11.25$ over $2 \times 6$ wall   |
| 7 and 8  | Continuous insulation with $R$ -value $\geq R10$ over $2 \times 4$ wall<br>Continuous insulation with $R$ -value $\geq R15$ over $2 \times 6$ wall   |

For SI: 1 pound per cubic foot = 16 kg/m<sup>3</sup>.

a. Spray foam with a maximum permanence of 1.5 perms at the installed thickness applied to the interior cavity side of wood structural panels, fiberboard, insulating sheathing or gypsum is deemed to meet the continuous insulation requirement where the spray foam  $R$ -value meets or exceeds the specified insulating sheathing  $R$ -value.