

**ROOFING SQUARE** is 100 square feet (9.3 m<sup>2</sup>) of roof surface.

**SPOT CEMENTING** is discontinuous application of asphalt, cold liquid asphalt compound, coal tar pitch or other approved cementing material.

**THERMOPLASTIC MEMBRANE ROOF COVERING** is a sheet membrane composed of polymers and other proprietary ingredients, in compliance with UBC Standard 15-6, whose chemical composition allows the sheet to be welded together by either heat or solvent throughout its service life.

**THERMOSET MEMBRANE ROOF COVERING** is a sheet membrane composed of polymers and other proprietary ingredients, in compliance with UBC Standard 15-6, whose chemical composition vulcanizes or cross-links during manufacture or during its service life.

**TILES** are roof covering units, typically clay, concrete or cement-based material, that comply with UBC Standard 15-5.

**UNDERLAYMENT** is one or more layers of felt, sheathing paper, nonbituminous saturated felt or other approved material over which a roofing system is applied.

**VAPOR RETARDER** is a layer of material or a laminate used to appreciably reduce the flow of water vapor into the roofing system.

**WOOD SHAKES** are split or sawn tapered or nontapered pieces of approved durable wood or taper-sawn pieces of approved preservative treated wood complying with UBC Standard 15-3.

**WOOD SHAKES AND SHINGLES, FIRE-RETARDANT (treated)**, are wood shakes and shingles complying with UBC Standard 15-3 or 15-4 impregnated by the full-cell vacuum-pressure process with fire-retardant chemicals, complying with UBC Standard 15-2 for use on Class A, B or C roofs.

**WOOD SHINGLES** are tapered pieces of approved durable wood sawn both sides complying with UBC Standard 15-4.

### SECTION 1503 — ROOFING REQUIREMENTS

The roof covering or roofing assembly on any structure regulated by this code shall be as specified in Table 15-A and as classified in Section 1504. Noncombustible roof covering as defined in Section 1504.2 may be applied in accordance with the manufacturer's requirements in lieu of a fire-retardant roofing assembly.

Roofing shall be secured or fastened to the supporting roof construction and shall provide weather protection for the building at the roof.

### SECTION 1504 — ROOFING CLASSIFICATION

**1504.1 Fire-retardant Roofing.** Fire-retardant roofs are roofing assemblies complying with UBC Standard 15-2 and listed as Class A, B or C roofs.

**1504.2 Noncombustible Roof Covering.** Noncombustible roof covering shall be one of the following:

1. Cement shingles or sheets.
2. Exposed concrete slab roof.
3. Ferrous or copper shingles or sheets.
4. Slate shingles.
5. Clay or concrete roofing tile.

6. Approved roof covering of noncombustible material.

**1504.3 Nonrated Roofing.** Nonrated roofing is approved material that is not listed as a Class A, B or C roofing assembly.

### SECTION 1505 — ATTICS: ACCESS, DRAFT STOPS AND VENTILATION

**1505.1 Access.** An attic access opening shall be provided to attics of buildings with combustible ceiling or roof construction.

**EXCEPTION:** Attics with a maximum vertical height of less than 30 inches (762 mm).

The opening shall not be less than 22 inches (559 mm) by 30 inches (762 mm) and shall be located in a corridor, hallway or other readily accessible location. Thirty-inch-minimum (762 mm) unobstructed headroom in the attic space shall be provided at or above the access opening.

**1505.2 Draft Stops.** Attics, mansards, overhangs and other concealed roof spaces formed of combustible construction shall be draft stopped as specified in Section 708.3.

**1505.3 Ventilation.** Where determined necessary by the building official due to atmospheric or climatic conditions, enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain and snow. The net free ventilating area shall not be less than  $1/150$  of the area of the space ventilated.

**EXCEPTIONS:** 1. The opening area may be  $1/300$  of the area of the space ventilated provided 50 percent of the required opening area is provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet (914 mm) above eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents.

2. The opening area may be  $1/300$  of the area of the space ventilated provided a vapor barrier not exceeding 1 perm [ $5.7 \times 10^{-11}$  kg/(Pa · s · m<sup>2</sup>)] is installed on the warm side of the attic insulation.

Where eave or cornice vents are installed, insulation shall not block the free flow of air. A minimum of 1 inch (25 mm) of air space shall be provided between the insulation and roof sheathing.

Openings for ventilation shall be covered with corrosion-resistant metal mesh with mesh openings of  $1/4$  inch (6.4 mm) in dimension.

Smoke and heat venting shall be in accordance with Section 906.

### SECTION 1506 — ROOF DRAINAGE

**1506.1 General.** Roofs shall be sloped a minimum of 1 unit vertical in 48 units horizontal (2% slope) for drainage unless designed for water accumulation in accordance with Section 1611 and approved by the building official.

**1506.2 Roof Drains.** Unless roofs are sloped to drain over roof edges, roof drains shall be installed at each low point of the roof.

Roof drains shall be sized and discharged in accordance with the Plumbing Code.

**1506.3 Overflow Drains and Scuppers.** Where roof drains are required, overflow drains having the same size as the roof drains shall be installed with the inlet flow line located 2 inches (51 mm) above the low point of the roof, or overflow scuppers having three times the size of the roof drains and having a minimum opening