

appropriate ultimate design wind speed. Asphalt shingle packaging shall bear a *label* to indicate compliance with ASTM D7158 and the required classification in Table R905.2.4.1.

Exception: Asphalt shingles not included in the scope of ASTM D7158 shall be tested and *labeled* in accordance with ASTM D3161. Asphalt shingle packaging shall bear a *label* to indicate compliance with ASTM D3161 and the required classification in Table R905.2.4.1.

R905.2.5 Fasteners. Fasteners for asphalt shingles shall be galvanized steel, stainless steel, aluminum or copper roofing nails, minimum 12-gauge (0.105 inch (3 mm)) shank with a minimum 3/8-inch-diameter (9.5 mm) head, complying with ASTM F1667, of a length to penetrate through the roofing materials and not less than 3/4 inch (19.1 mm) into the roof sheathing. Where the roof sheathing is less than 3/4 inch (19.1 mm) thick, the fasteners shall penetrate through the sheathing.

R905.2.6 Attachment. Asphalt shingles shall have the minimum number of fasteners required by the manufacturer's *approved* installation instructions, but not less than four fasteners per strip shingle or two fasteners per individual shingle. Where the roof slope exceeds 2:12, vertical in 12 units horizontal (21:12, 175-percent slope), shingles shall be installed in accordance with the manufacturer's *approved* installation instructions.

inside the exterior wall line of the building. On roofs with slope equal to or greater than 8 units vertical in 12 units horizontal (67-percent slope), the ice barrier shall also be applied not less than 36 inches (914 mm) measured along the roof slope from the eave edge of the building.

Exception: Detached accessory structures not containing conditioned floor area.

R905.2 Asphalt shingles. The installation of asphalt shingles shall comply with the provisions of this section.

R905.2.1 Sheathing requirements. Asphalt shingles shall be fastened to solidly sheathed decks.

R905.2.2 Slope. Asphalt shingles shall be used only on roof slopes of 2 units vertical in 12 units horizontal (17-percent slope) or greater. For roof slopes from 2 units vertical in 12 units horizontal (17-percent slope) up to 4 units vertical in 12 units horizontal (33-percent slope), double underlayment application is required in accordance with Section R905.1.1.

R905.2.3 Underlayment. Underlayment shall comply with Section R905.1.1.

R905.2.4 Asphalt shingles. Asphalt shingles shall comply with ASTM D3462.

R905.2.4.1 Wind resistance of asphalt shingles. Asphalt shingles shall be tested in accordance with ASTM D7158. Asphalt shingles shall meet the classification requirements of Table R905.2.4.1 for the

TABLE R905.1 (1)
UNDERLAYMENT TYPES

ROOF COVERING	SECTION	AREAS WHERE WIND DESIGN IS NOT REQUIRED IN ACCORDANCE WITH FIGURE R301.2.1.1	AREAS WHERE WIND DESIGN IS REQUIRED IN ACCORDANCE WITH FIGURE R301.2.1.1
Asphalt shingles	R905.2	ASTM D226 Type I or II	ASTM D226 Type II ASTM D4869 Type III or Type IV
Asphalt shingles	R905.2	ASTM D4869 Type I, II, III or IV	ASTM D4869 Type III or Type IV
Asphalt shingles	R905.2	ASTM D6757	ASTM D6757
Asphalt shingles	R905.3	ASTM D226 Type II	ASTM D226 Type II
Asphalt shingles	R905.3	ASTM D226 Type I	ASTM D226 Type I
Asphalt shingles	R905.3	ASTM D6380 Class M mineral-surfaced roll roofing	ASTM D226 Type II
Asphalt shingles	R905.4	ASTM D226 Type I or II	ASTM D226 Type II
Asphalt shingles	R905.4	ASTM D4869 Type I, II, III or IV	ASTM D4869 Type III or Type IV
Asphalt shingles	R905.5	ASTM D226 Type I or II	ASTM D226 Type II
Asphalt shingles	R905.5	ASTM D4869 Type I, II, III or IV	ASTM D4869 Type III or Type IV
Asphalt shingles	R905.6	ASTM D226 Type I	ASTM D226 Type II
Asphalt shingles	R905.6	ASTM D4869 Type I, II, III or IV	ASTM D4869 Type III or Type IV
Asphalt shingles	R905.7	ASTM D226 Type I or II	ASTM D226 Type II
Asphalt shingles	R905.7	ASTM D4869 Type I, II, III or IV	ASTM D4869 Type III or Type IV
Asphalt shingles	R905.8	ASTM D226 Type I or II	ASTM D226 Type II
Asphalt shingles	R905.8	ASTM D4869 Type I, II, III or IV	ASTM D4869 Type III or Type IV
Asphalt shingles	R905.10	Manufacturer's instructions	ASTM D226 Type II ASTM D4869 Type III or Type IV
Asphalt shingles	R905.16	ASTM D4869 Type I, II, III or IV	ASTM D4869 Type III or Type IV

2021 INTERNATIONAL RESIDENTIAL CODE®

SECTION R905 REQUIREMENTS FOR ROOF COVERINGS

R905.1 Roof covering application. Roof coverings shall be applied in accordance with the applicable provisions of the section and the manufacturer's installation instructions. Unless otherwise specified in this section, roof covering shall be installed to resist the component and cladding loads specified in Table R301.2.1(1), adjusted for height and exposure in accordance with Table R301.2.1(2).

R905.1.1 Underlayment. Underlayment for asphalt shingles, clay and concrete tile, metal roof shingles, mineral-surfaced roll roofing, slate and slate-type shingles, wood shingles, wood shakes, metal roof panels and photovoltaic shingles shall conform to the applicable standards listed in this chapter. Underlayment materials required to comply with ASTM D226, D1970, D4869 and D6757 shall bear a *label* indicating compliance to the same designation and, if applicable, type classification indicated in Table R905.1.1(1). Underlayment shall be applied in accordance with Table R905.1.1(2). Underlayment shall be attached in accordance with Table R905.1.1(3).

Exceptions:

1. As an alternative, self-adhering polymer-modified bitumen underlayment bearing a *label* indicating compliance with ASTM D1970.
2. As an alternative, a minimum 4-inch-wide (102 mm) strip of self-adhering polymer-modified bitumen membrane bearing a *label* indicating compliance with the manufacturer's instructions for the deck material, shall be applied over all joints in the roof decking and approved underlayment complying with Table R905.1.1(1) for the applicable roof covering. For areas where wind design is not required in accordance with Figure R301.2.1.1, the underlayment shall be attached in accordance with Table R905.1.1(3).

R905.1.2 Ice barriers. In areas where there has been a history of ice forming along the eaves causing damage to water as designated in Table R301.2.1, an ice barrier shall be installed for asphalt shingles, metal roof panels, mineral-surfaced roll roofing, slate and slate-type shingles, wood shingles and wood shakes. The ice barrier shall consist of not fewer than two layers of mineral-surfaced roll roofing, or a self-adhering polymer-modified bitumen sheet shall be used in place of normal bitumen and extend from the lowest edges of the surfaces to a point not less than 24 inches (610 mm)

tion more than 30 inches (762 mm) wide as measured perpendicular to the slope. Cricket or saddle coverings shall be sheet metal or of the same material as the roof covering.

Exception: Unit skylights installed in accordance with Section R308.6 and flashed in accordance with the manufacturer's instructions shall be permitted to be installed without a cricket or saddle.

R903.3 Coping. Parapet walls shall be properly coped with noncombustible, weatherproof materials of a width not less than the thickness of the parapet wall.

R903.4 Roof drainage. Unless roofs are sloped to drain over roof edges, roof drains shall be installed at each low point of the roof.

R903.4.1 Secondary (emergency overflow) drains or scuppers. Where roof drains are required, secondary emergency overflow roof drains or scuppers shall be provided where the roof perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason. 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 height of 4 inches (102 mm) shall be installed in the adjacent parapet walls with the inlet flow located 2 inches (51 mm) above the low point of the roof served. The installation and sizing of overflow drains, leaders and conductors shall comply with Sections 1106 and 1108 of the *International Plumbing Code*, as applicable.

Overflow drains shall discharge to an *approved* location and shall not be connected to roof drain lines.

SECTION R904 MATERIALS

R904.1 Scope. The requirements set forth in this section shall apply to the application of roof covering materials specified herein. *Roof assemblies* shall be applied in accordance with this chapter and the manufacturer's installation instructions. Installation of *roof assemblies* shall comply with the applicable provisions of Section R905.

R904.2 Compatibility of materials. *Roof assemblies* shall be of materials that are compatible with each other and with the building or structure to which the materials are applied.

R904.3 Material specifications and physical characteristics. Roof covering materials shall conform to the applicable standards listed in this chapter.

R904.4 Product identification. Roof covering materials shall be delivered in packages bearing the manufacturer's identifying marks and *approved* testing agency *labels* required. Bulk shipments of materials shall be accompanied by the same information issued in the form of a certificate or on a bill of lading by the manufacturer.

TABLE R905.1.1(2)
UNDERLAYMENT APPLICATION

ROOF COVERING	SECTION	AREAS WHERE WIND DESIGN IS NOT REQUIRED IN ACCORDANCE WITH FIGURE R901.2.1.1	AREAS WHERE WIND DESIGN IS REQUIRED IN ACCORDANCE WITH FIGURE R901.2.1.1
Asphalt shingles	R905.2	For roof slopes from 2 units vertical in 12 units horizontal (2/12), up to 4 units vertical in 12 units horizontal (4/12), underlayment shall be two layers applied in the following manner: apply a 19-inch strip of underlayment felt parallel to and starting at the eaves. Starting at the eave, apply 36-inch-wide sheets of underlayment, overlapping successive sheets 19 inches. Distortions in the underlayment shall not interfere with the ability of the shingles to seal. End laps shall be 4 inches and shall be offset by 6 feet. For roof slopes of 4 units vertical in 12 units horizontal (4/12) or greater, underlayment shall be one layer applied in the following manner: underlayment shall be applied single fashion, parallel to and starting from the eave and lapped 2 inches. Distortions in the underlayment shall not interfere with the ability of the shingles to seal. End laps shall be 4 inches and shall be offset by 6 feet.	Underlayment shall be two layers applied in the following manner: apply a 19-inch strip of underlayment felt parallel to and starting at the eaves. Starting at the eave, apply 36-inch-wide sheets of underlayment, overlapping successive sheets 19 inches. Distortions in the underlayment shall not interfere with the ability of the shingles to seal. End laps shall be 4 inches and shall be offset by 6 feet.
Clay and concrete tile	R905.3	For roof slopes from 2/12, units vertical in 12 units horizontal (2/12), up to 4 units vertical in 12 units horizontal (4/12), underlayment shall be not fewer than two layers applied as follows: starting at the eave, apply a 19-inch strip of underlayment parallel with the eave. Starting at the eave, apply 36-inch-wide strips of underlayment felt, overlapping successive sheets 19 inches. End laps shall be 4 inches and shall be offset by 6 feet. For roof slopes of 4 units vertical in 12 units horizontal (4/12) or greater, underlayment shall be not fewer than one layer of underlayment felt applied single fashion, parallel to and starting from the eaves and lapped 2 inches. End laps shall be 4 inches and shall be offset by 6 feet.	Underlayment shall be two layers applied in the following manner: apply a 19-inch strip of underlayment felt parallel to and starting at the eaves. Starting at the eave, apply 36-inch-wide sheets of underlayment, overlapping successive sheets 19 inches. Distortions in the underlayment shall not interfere with the ability of the shingles to seal. End laps shall be 4 inches and shall be offset by 6 feet.
Metal roof shingles	R905.4		Underlayment shall be two layers applied in the following manner: apply a 19-inch strip of underlayment felt parallel to and starting at the eaves. Starting at the eave, apply 36-inch-wide sheets of underlayment, overlapping successive sheets 19 inches. Distortions in the underlayment shall not interfere with the ability of the shingles to seal. End laps shall be 4 inches and shall be offset by 6 feet.
Mineral-surfaced roll roofing	R905.5		Underlayment shall be two layers applied in the following manner: apply a 19-inch strip of underlayment felt parallel to and starting at the eaves. Starting at the eave, apply 36-inch-wide sheets of underlayment, overlapping successive sheets 19 inches. Distortions in the underlayment shall not interfere with the ability of the shingles to seal. End laps shall be 4 inches and shall be offset by 6 feet.
Slate and slate-type shingles	R905.6	Apply in accordance with the manufacturer's installation instructions.	
Wood shingles	R905.7		
Wood shakes	R905.8		
Metal panels	R905.10		
Photovoltaic shingles	R905.16	For roof slopes from 2 units vertical in 12 units horizontal (2/12), up to 4 units vertical in 12 units horizontal (4/12), underlayment shall be two layers applied in the following manner: apply a 19-inch strip of underlayment felt parallel to and starting at the eaves. Starting at the eave, apply 36-inch-wide sheets of underlayment, overlapping successive sheets 19 inches. Distortions in the underlayment shall not interfere with the ability of the shingles to seal. End laps shall be 4 inches and shall be offset by 6 feet. For roof slopes of 4 units vertical in 12 units horizontal (4/12) or greater, underlayment shall be one layer applied in the following manner: underlayment shall be applied single fashion, parallel to and starting from the eave and lapped 2 inches. Distortions in the underlayment shall not interfere with the ability of the shingles to seal. End laps shall be 4 inches and shall be offset by 6 feet.	Underlayment shall be two layers applied in the following manner: apply a 19-inch strip of underlayment felt parallel to and starting at the eaves. Starting at the eave, apply 36-inch-wide sheets of underlayment, overlapping successive sheets 19 inches. Distortions in the underlayment shall not interfere with the ability of the shingles to seal. End laps shall be 4 inches and shall be offset by 6 feet.

For S₁: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s.

TABLE R905.1.1(3)
UNDERLAYMENT APPLICATION

ROOF COVERING	SECTION	AREAS WHERE WIND DESIGN IS NOT REQUIRED IN ACCORDANCE WITH FIGURE R901.2.1.1	AREAS WHERE WIND DESIGN IS REQUIRED IN ACCORDANCE WITH FIGURE R901.2.1.1
Asphalt shingles	R905.2		The underlayment shall be attached with corrosion-resistant fasteners in a grid pattern of 12 inches between side laps with a 6-inch spacing at side and end laps. Underlayment shall be attached using annular ring or deformed shank nails with 1-inch-diameter metal or plastic caps. Metal caps shall have a thickness of not less than 32-gauge sheet metal. Power-driven metal caps shall have a minimum thickness of 0.010 inch. Minimum thickness of the outside edge of plastic caps shall be 0.035 inch. The cap nail shank shall be not less than 0.083 inch. The cap nail shank shall have a length sufficient to penetrate through the roof sheathing or not less than 1/4 inch into the roof sheathing.
Clay and concrete tile	R905.3		The underlayment shall be attached with corrosion-resistant fasteners in a grid pattern of 12 inches between side laps with a 6-inch spacing at side and end laps. Underlayment shall be attached using annular ring or deformed shank nails with 1-inch-diameter metal or plastic caps. Metal caps shall have a thickness of not less than 32-gauge sheet metal. Power-driven metal caps shall have a minimum thickness of 0.010 inch. Minimum thickness of the outside edge of plastic caps shall be 0.035 inch. The cap nail shank shall be not less than 0.083 inch. The cap nail shank shall have a length sufficient to penetrate through the roof sheathing or not less than 1/4 inch into the roof sheathing.
Photovoltaic	R905.16	Fastened sufficiently to hold in place	
Metal roof shingles	R905.4		The underlayment shall be attached with corrosion-resistant fasteners in a grid pattern of 12 inches between side laps with a 6-inch spacing at side and end laps. Underlayment shall be attached using annular ring or deformed shank nails with 1-inch-diameter metal or plastic caps. Metal caps shall have a thickness of not less than 32-gauge sheet metal. Power-driven metal caps shall have a minimum thickness of 0.010 inch. Minimum thickness of the outside edge of plastic caps shall be 0.035 inch. The cap nail shank shall be not less than 0.083 inch. The cap nail shank shall have a length sufficient to penetrate through the roof sheathing or not less than 1/4 inch into the roof sheathing.
Mineral-surfaced roll roofing	R905.5		The underlayment shall be attached with corrosion-resistant fasteners in a grid pattern of 12 inches between side laps with a 6-inch spacing at side and end laps. Underlayment shall be attached using annular ring or deformed shank nails with 1-inch-diameter metal or plastic caps. Metal caps shall have a thickness of not less than 32-gauge sheet metal. Power-driven metal caps shall have a minimum thickness of 0.010 inch. Minimum thickness of the outside edge of plastic caps shall be 0.035 inch. The cap nail shank shall be not less than 0.083 inch. The cap nail shank shall have a length sufficient to penetrate through the roof sheathing or not less than 1/4 inch into the roof sheathing.
Slate and slate-type shingles	R905.6		The underlayment shall be attached with corrosion-resistant fasteners in a grid pattern of 12 inches between side laps with a 6-inch spacing at side and end laps. Underlayment shall be attached using annular ring or deformed shank nails with 1-inch-diameter metal or plastic caps. Metal caps shall have a thickness of not less than 32-gauge sheet metal. Power-driven metal caps shall have a minimum thickness of 0.010 inch. Minimum thickness of the outside edge of plastic caps shall be 0.035 inch. The cap nail shank shall be not less than 0.083 inch. The cap nail shank shall have a length sufficient to penetrate through the roof sheathing or not less than 1/4 inch into the roof sheathing.
Wood shingles	R905.7		The underlayment shall be attached with corrosion-resistant fasteners in a grid pattern of 12 inches between side laps with a 6-inch spacing at side and end laps. Underlayment shall be attached using annular ring or deformed shank nails with 1-inch-diameter metal or plastic caps. Metal caps shall have a thickness of not less than 32-gauge sheet metal. Power-driven metal caps shall have a minimum thickness of 0.010 inch. Minimum thickness of the outside edge of plastic caps shall be 0.035 inch. The cap nail shank shall be not less than 0.083 inch. The cap nail shank shall have a length sufficient to penetrate through the roof sheathing or not less than 1/4 inch into the roof sheathing.
Wood shakes	R905.8		The underlayment shall be attached with corrosion-resistant fasteners in a grid pattern of 12 inches between side laps with a 6-inch spacing at side and end laps. Underlayment shall be attached using annular ring or deformed shank nails with 1-inch-diameter metal or plastic caps. Metal caps shall have a thickness of not less than 32-gauge sheet metal. Power-driven metal caps shall have a minimum thickness of 0.010 inch. Minimum thickness of the outside edge of plastic caps shall be 0.035 inch. The cap nail shank shall be not less than 0.083 inch. The cap nail shank shall have a length sufficient to penetrate through the roof sheathing or not less than 1/4 inch into the roof sheathing.
Metal panels	R905.10	Manufacturer's installation instructions.	

For S₁: 1 inch = 25.4 mm, 1 mile per hour = 0.447 m/s.

TABLE R905.2.4.1
CLASSIFICATION OF ASPHALT ROOF SHINGLES

MINIMUM ULTIMATE DESIGN WIND SPEED, V _{ULT} , FROM FIGURE R901.2.1	MAXIMUM BASIC WIND SPEED, V _{WB} , FROM TABLE R901.2.1.3	ASTM D7158* SHINGLE CLASSIFICATION	ASTM D3161 SHINGLE CLASSIFICATION
110	85	D, G or H	A, D or F
116	90	D, G or H	A, D or F
129	100	G or H	A, D or F
142	110	G or H	F
155	120	G or H	F
168	130	H	F
181	140	H	F
194	150	H	F

For S₁: 1 inch = 25.4 mm, 1 mile per hour = 0.447 m/s.

*Additional calculations are required for wind directions considered in ASTM D7158 assume Exposure Category B or C and a building height of 60 feet or less. Additional calculations are required for wind directions outside of these assumptions.

R905.17.1 Deck requirements. *BIPV* roof panels shall be applied to a solid or closely-fitted deck, except where the roof covering is specifically designed to be applied over spaced sheathing.

R905.17.2 Deck slope. *BIPV* roof panels shall be used only on roof slopes of 2 units vertical in 12 units horizontal (17-percent slope) or greater.

R905.17.3 Underlayment. Underlayment shall comply with Section 905.1.1.

R905.17.3.1 Ice barrier. Where required, an ice barrier shall comply with Section 905.1.2.

R905.17.4 Ice barrier. In areas where there has been a history of ice forming along the eaves causing a backup of water, as designated in Table R301.2, an ice barrier that consists of not less than two layers of underlayment cemented together or of a self-adhering polymer-modified bitumen sheet shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point not less than 24 inches (610 mm) inside the exterior wall line of the building.

Exception: Detached accessory structures that do not contain conditioned floor area.

R905.17.5 Material standards. *BIPV* roof panels shall be listed and labeled in accordance with UL 7103 or with both UL 61730-1 and UL 61730-2.

R905.17.6 Attachment. *BIPV* roof panels shall be attached in accordance with the manufacturer's installation instructions.

SECTION R906 ROOF INSULATION

R906.1 General. Where above-deck thermal insulation is installed, such insulation shall be covered with an approved roof covering and shall comply with NFPA 276 or UL 1256.

R906.2 Material standards. Above-deck thermal insulation board shall comply with the standards in Table R906.2.

TABLE R906.2
MATERIAL STANDARDS FOR ROOF INSULATION

Cellular glass board	ASTM C552
Composite boards	ASTM C1289, Type III, IV, V or VI
Expanded polystyrene	ASTM C578
Extruded polystyrene board	ASTM C578
Fiber-reinforced gypsum board	ASTM C1278
Glass-faced gypsum board	ASTM C1177
Mineral wool board	ASTM C726
Perlite board	ASTM C728
Polyisocyanurate board	ASTM C1289, Type I or II
Wood fiberboard	ASTM C208

SECTION R907 ROOFTOP-MOUNTED PHOTOVOLTAIC PANEL SYSTEMS

R907.1 Rooftop-mounted photovoltaic panel systems. Rooftop-mounted photovoltaic panel systems shall be designed and installed in accordance with Section R324 and NFPA 70.

SECTION R908 REROOFING

R908.1 General. Materials and methods of application used for reroofing or replacing an existing roof covering shall comply with the requirements of Chapter 9.

Exceptions:

1. **Reroofing** shall not be required to meet the minimum design slope requirement of one-quarter unit vertical in 12 units horizontal (2-percent slope) in Section R905 for roofs that provide positive roof drainage.

2. For roofs that provide positive drainage, reroofing or replacing an existing roof covering shall not require the secondary (emergency overflow) drains or scuppers of Section R903.4.1 to be added to an existing roof.

R908.2 Structural and construction loads. The structural roof components shall be capable of supporting the roof covering system and the material and equipment loads that will be encountered during installation of the roof covering system.

R908.3 Roof replacement. Roof replacement shall include the removal of existing layers of roof coverings down to the roof deck.

Exception: Where the existing roof assembly includes an ice barrier membrane that is adhered to the roof deck, the existing ice barrier membrane shall be permitted to remain in place and covered with an additional layer of ice barrier membrane in accordance with Section R905.

R908.3.1 Roof recover. The installation of a new roof covering over an existing roof covering shall be permitted where any of the following conditions occur:

- Where the new roof covering is installed in accordance with the roof covering manufacturer's approved instructions
- Complete and separate roofing systems, such as standing-seam metal roof systems, that are designed to transmit the roof loads directly to the building's structural system and do not rely on existing roofs and roof coverings for support, not require the removal of existing roof coverings
- Metal panel, metal shingle and concrete and clay tile roof coverings shall be permitted to be installed over existing wood shake roofs when applied in accordance with Section R908.4

- The application of a new protective roof coating over an existing protective roof coating, metal roof panel, metal roof shingle, mineral surfaced roll roofing, built-up roof, modified bitumen roofing, thermoset and thermoplastic single-ply roofing and spray polyurethane foam roofing system shall be permitted without tear-off of existing roof coverings.

R908.3.1.1 Roof recover not allowed. A roof recover shall not be permitted where any of the following conditions occur:

- Where the existing roof or roof covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.
- Where the existing roof covering is slate, clay, cement or asbestos-cement tile.
- Where the existing roof has two or more applications of any type of roof covering.

R908.4 Roof recovering. Where the application of a new roof covering over wood shingle or shake roofs creates a combustible concealed space, the entire existing surface shall be covered with gypsum board, mineral fiber, glass fiber or other approved materials securely fastened in place.

R908.5 Reinstallation of materials. Existing slate, clay or cement tile shall be permitted for reinstallation, except that damaged, cracked or broken slate or tile shall not be reinstalled. Any existing flashings, edgings, outlets, vents or similar devices that are a part of the assembly shall be replaced where rusted, damaged or deteriorated. Aggregate surfacing materials shall not be reinstalled.

R908.6 Flashings. Flashings shall be reconstructed in accordance with approved manufacturer's installation instructions. Metal flashing to which bluminous materials are to be adhered shall be primed prior to installation.