

Installation Instructions



Three-Tab Shingles Standard & Metric Size Shingles

Owens Corning three-tab shingles are designed for new or reroofing work over properly built and supported wood roof decks having adequate nail holding capacity and a smooth surface.

UL Class A Fire Resistance & Wind Resistance Ratings

When applied in accordance with these instructions, these shingles carry the Underwriters Laboratories Class A fire resistance rating, the top rating for residential shingles. They will resist exposure to fire in accordance with UL Standard 790. When applied properly, these shingles also meet UL wind resistance Standard 997. All three-tab shingles have a factory-applied strip of special thermoplastic adhesive on each shingle. After direct exposure to the sun's heat, each course bonds securely to the course below (a matter of days in spring through fall seasons; in winter it varies depending on geographical location, roof slope and orientation of the house on the site, in relation to the sun).

Other Roofing Materials You May Need

Metal Drip Edges – are recommended along rake and eaves edges of all decks.

Underlayment – is recommended for roofing over any bare deck, and is *required* for a UL Class A fire rating in most cases. Use only “breather type” material such as Asphalt Saturated Felt or Shingle Underlayment classified by UL as a Prepared Roofing Accessory to assure Class A fire performance and watertight performance from wind-driven rain.

Nails – must be galvanized, 11- or 12-gauge, with heads at least 3/8" in diameter.

Staples – must be 16-gauge minimum, 15/16" minimum crown width and corrosion protected.

All Fasteners – must be driven flush with the shingle surface and penetrate at least 3/4" into the wood deck. Where the deck is less than 3/4" thick, the fastener should be long enough to penetrate fully and extend at least 1/8" through the roof deck. *Owens Corning recommends the use of nails as the preferred method of attaching shingles to wood decking or other nailable surfaces.*

Plastic Cement – where required must meet ASTM D-4586 Type II (Asbestos Free).

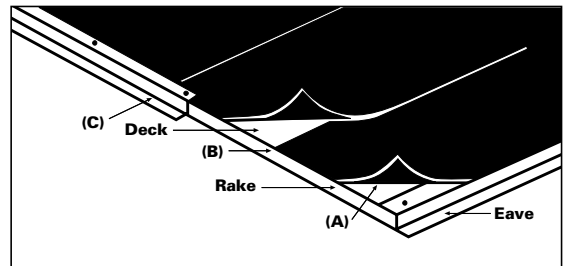
1a Deck Preparation

For Standard Slope Decks – 4" in 12" or more

Application of underlayment, metal drip edges and eaves flashing:

- (A) Apply one layer of underlayment over metal drip edge at eaves. Use only enough fasteners to hold in place.
- (B) Overlap successive courses 2". Overlap course ends 4". Side laps are to be staggered 6' apart.
- (C) Apply metal drip edge over underlayment at rake.

Note: Where ice-damming may cause leaks, apply Owens Corning WeatherLock® underlayment or equivalent eaves flashing at least 24" beyond the inside wall line. When using a coated smooth roll or mineral surfaced roll roofing, apply over the underlayment. When using a specialty eaves flashing product, follow the manufacturer's instructions.



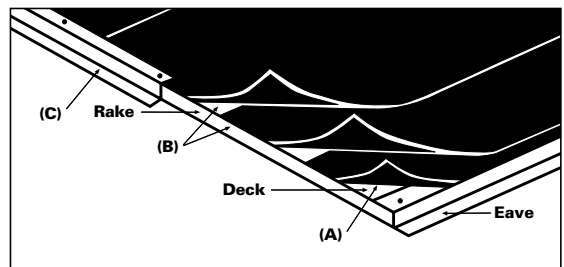
1b Deck Preparation

For Low Slope Decks – 2" in 12" to less than 4" in 12"

Application of underlayment, metal drip edges and eaves flashing:

- (A) Apply 19" starter strip of underlayment over metal drip edge at eaves. Use only enough fasteners to hold in place.
- (B) Use 36" strip of underlayment for remaining courses, overlapping each course 19". Side laps are to be staggered 6' apart.
- (C) Apply metal drip edge over underlayment at rake.

Note: Where eaves flashing is required, apply Owens Corning WeatherLock underlayment or equivalent specialty eaves flashing product or apply a continuous layer of asphalt plastic cement between the plies of underlayment at least 24" beyond the inside wall line.





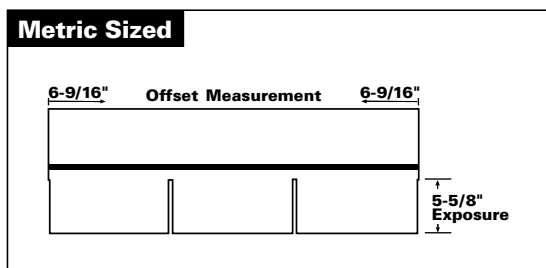
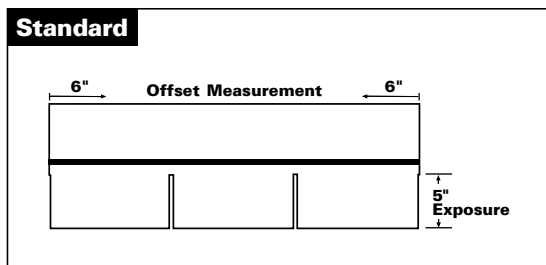
Three-Tab Shingles

2 Shingle Application

Apply shingles over properly prepared roof deck, starting at bottom of roof and working across and up. This will blend shingles from one bundle into the next and minimize any normal shade variation. Three-tab shingles are applied with a 6" offset (6-9/16" offset with metric size shingles). While a 6" offset (6-9/16" metric) is recommended, application with offsets of 4" or 5" are also acceptable.

Caution must be exercised to assure that end joints are no closer than 2" from a fastener in the shingle below and that side laps are no less than 4" in succeeding courses. Refer to course applications steps for specific instructions.

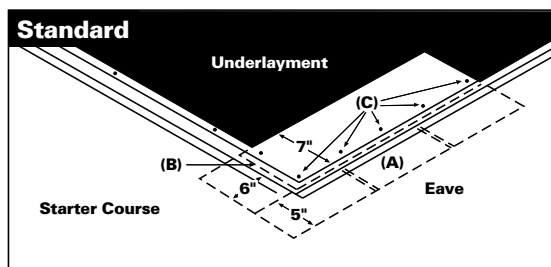
If racking application methods are used, the applicator must ensure that the proper number of fasteners is used, and use shingles from several different bundles to reduce potential for color variation.



3 Shingle Application

Starter Course

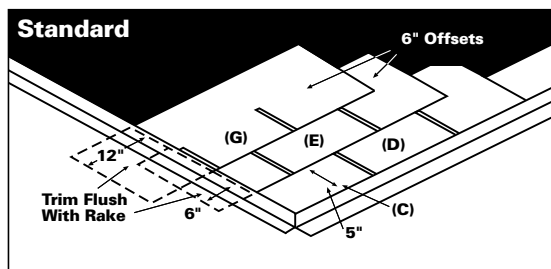
- (A) Trim tabs off all starter course shingles so sealant can seal along the eave's edge.
- (B) Trim 6" (6-9/16" metric) off rake end of first shingle. Extend 3/8" beyond rake and eaves, and fasten.
- (C) Complete rest of starter course. Use five fasteners for each shingle, placed 2" to 3" up from the eaves edge.



First Course

- (D) Apply first course starting with a full shingle, even with the starter course. Fasten securely according to instructions.

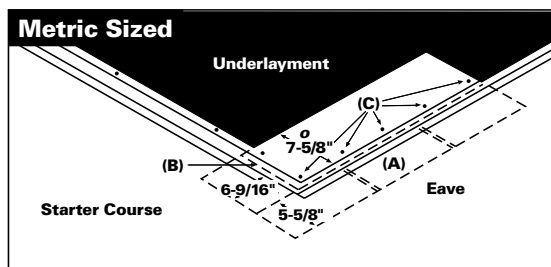
Note: Complete course with full shingles.



Second Course

- (E) Begin second course by positioning first shingle 6" (6-9/16" metric) from the end of the underlying shingle, with the butt edge aligned with the top of the cutouts in the course below.
- (F) Leave 5" (5-5/8" metric) exposure, fasten securely and trim excess overhang at rake.

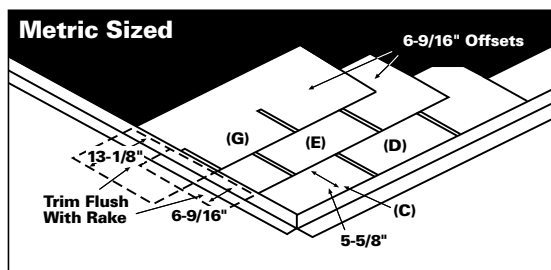
Note: Complete course with full shingles.



Third Course through Sixth Course

- (G) Begin each subsequent course by positioning the first shingle 6" (6-9/16" metric) from the end of the underlying shingle, with the butt edge aligned with the top of the cutouts in the course below. Complete by repeating Step (F).

Note: Complete each course with full shingles.



Seventh Course

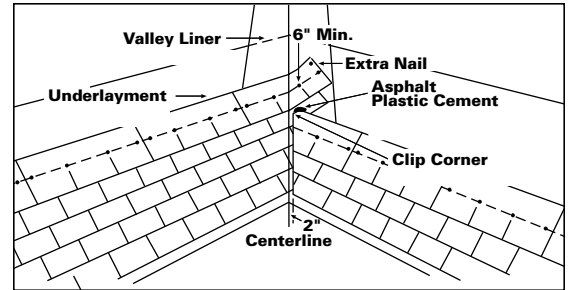
- (H) Apply seventh course starting with a full shingle. Leave 5" (5-5/8" metric) exposure and fasten securely. Complete by repeating Step (F).

Note: Complete course with full shingles. For succeeding courses, repeat steps for second through seventh courses.

4 Valley Construction

A closed-cut valley is recommended and is applied as follows:

- (A) Lay a 36"-wide valley liner of smooth surface roll roofing or Owens Corning *WeatherLock* underlayment or equivalent product. Fasten on outer edges only.
- (B) Lay all shingles on one side of valley and across center line of valley a minimum of 12". Fasten a minimum of 6" away from center line on each side of valley.
- (C) Strike a chalk line 2" from the center line of the unshingled side. Apply shingles on the unshingled side up to the chalk line and trim, taking care not to cut the underlying shingles. Clip upper corners of these shingles, cement and fasten.
- (D) Both woven and metal valleys are acceptable alternatives.

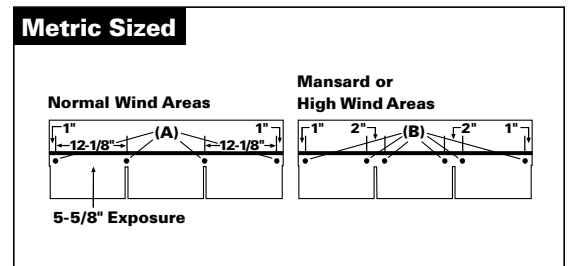
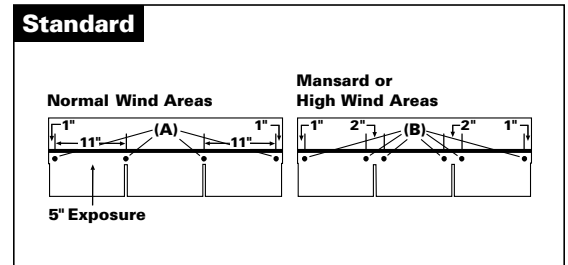


5 Fastening Instructions

Place fasteners 5/8" above the tab cut-out and below the sealant strip. Fastening into the sealant strip interferes with sealing and contributes to blow-offs.

- (A) Use four fasteners in normal wind areas.
- (B) Use six fasteners per shingle for mansard construction. Use of six fasteners per shingle is recommended in high wind areas.

Note: Do not drive fasteners into or above the adhesive strip.

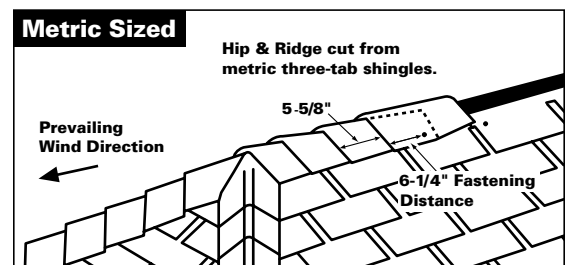
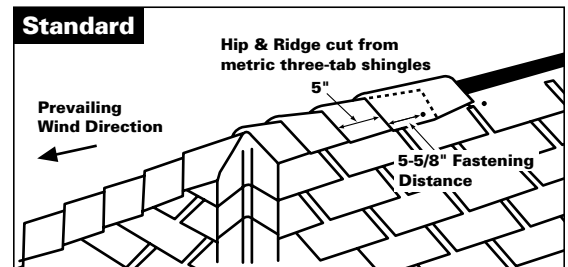


6 Hip & Ridge Application

High Ridge Hip & Ridge and High Style® Hip & Ridge available by region. If cutting three tabs for Hip & Ridge shingles, adhere to the following instructions.

Cut full three-tab shingles into three 12" x 12" (13-1/4" x 13-1/8" metric) Hip & Ridge shingles. Start hips at the eave and work up to ridge. Apply ridge only after hips have been applied, beginning on end of ridge opposite prevailing wind direction. Leave 5" (5-5/8" metric) exposure per shingle for Hip & Ridge application. Bend over the ridge; fasten on each side 5-5/8" (6-1/4" metric) from exposed end, 1" up from the edge. Cover exposed nails with asphalt plastic cement.

For more information on Hip & Ridge shingle application refer to Owens Corning's "How to Apply Hips & Ridges" (Pub. No. 5-RR-18491).



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7 Precautionary Notes

The manufacturer will not be responsible for problems resulting from any deviation from the recommended application instructions and the following precautions:

(A) Roof Deck: Recommended roof decks are 6" maximum width, 25/32" minimum thickness wood sheathing, or 3/8" minimum thickness plywood sheathing. Use plywood decking recommended by the American Plywood Association, Underwriters Laboratories, Inc., or local building codes.

These Owens Corning shingles have been tested and rated as Class A by Underwriters Laboratories when these shingles are applied over recommended decks. If other decks are used, the resulting construction may not qualify as Class A.

Regardless of deck type used, the roofing installer must ensure that the attic ventilation meets or exceeds FHA Minimum Property Standards.

Note: All roof structures, especially Mansard style construction, must have complete through ventilation from bottom to top to prevent heat build-up or entrapment of moisture-laden air that can cause premature shingle failure.

(B) Handling: Use extra care in handling shingles when the temperature is below 40°F. Shingles can be broken easily in cold weather or their edges damaged in hot weather.

(C) Fastening: Owens Corning recommends nails as the preferred method of attaching shingles to wood decking or other nailable surface. Drive all fasteners until they are flush with the surface of the shingle. Special care must be taken when using pneumatic staples or nail guns. An improperly adjusted pneumatic gun can result in raised fasteners causing sealing failure, raised tabs, leaks or blow-off.

Guidelines on fastener size, number and location must be followed. Owens Corning will not be responsible for any wind damage that occurs with shingles which have not been applied in accordance with these instructions.

(D) Mansard or Steep Slopes: For slopes exceeding 60 degrees or 21 inches per foot, use six fasteners and two spots of asphalt plastic cement per tab. All six fasteners must be spaced equally. Place two spots of asphalt plastic cement, 1" in diameter, under each shingle tab immediately upon installation.

(E) Storage: Store in a covered ventilated area at a maximum temperature of 110° F. Protect shingles from weather when stored at the job site. Do not store near steam pipes, radiators, etc.

(F) Hip & Ridge Shingles: These shingles should be cut from the back (smooth) side.

(G) All exposed material must be rated Class A by Underwriters Laboratories to maintain a Class A system.

8 Reroofing

If old asphalt shingles are to remain in place, nail down or cut away all loose, curled or lifted shingles. Sweep the surface clean of all loose debris just prior to applying the new roofing. Ensure proper size and length of fasteners. If roofing over old wood shingles, cut back the old shingles at eaves and rakes and apply wood edging strips. Some local building codes may require the use of a No. 30 asphalt saturated felt over the old wood shingles prior to reroofing. Consult local building code authorities. Surface must be smooth before shingles are installed. Make deck smooth by nailing down all loose and curled shingles, protruding nails, etc. Install beveled wood feathering strips, if necessary.

When roofing over existing shingles with a 5" (5-5/8" metric) tab exposure, the following procedure should be used for smoothest finished appearance and ease of alignment:

(A) Starter Course: Make starter shingles by removing the 5" (5-5/8" metric) tabs and cutting a 2" strip off the top of the shingles. Lay starter shingles so the top edge butts against the lower edge of the second course of the existing roof. Place the thermal sealing adhesive toward the eave edge. Secure with five fasteners evenly spaced per starter shingle placed 2" to 3" from the eaves edge. Complete the course.

(B) First Course: Trim 2" (3-1/8" metric) off the tops of all first course shingles. Lay them with their top edge butted against the bottom of the third course of the existing roof. Continue as instructed above.

(C) Second Course and Others: Use full-sized shingles and place them so their top edge is butted against the bottom edge of the next course of existing shingles. Continue as instructed above.



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