

## SINGER CAILIN ASPHALT SHINGLE ROOF TILES

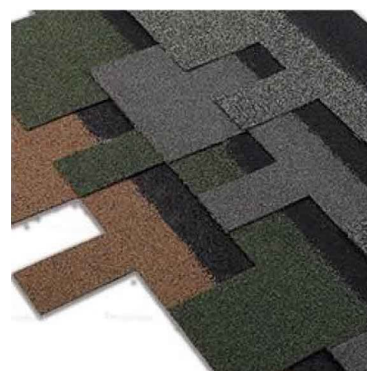
### INSTALLATION MANUAL



**FISH SCALE  
ASPHALT SHINGLE**



**LAMINATED  
ASPHALT SHINGLE**



**GOETHE  
ASPHALT SHINGLE**



**MOSAIC  
ASPHALT SHINGLE**



**3 TAB  
ASPHALT SHINGLE**



**DRAGON TEETH  
ASPHALT SHINGLE**

For more information on this product or to order samples

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Email at [info@cailinroofing.com](mailto:info@cailinroofing.com) or visit our

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## **Introduction**

When it's time to replace your roof, the amount of information available can be overwhelming. Lots of websites and videos go into great detail on how to shingle a roof. CAILIN will help you make sense of it all by highlighting the basic steps and outlining the fundamental purpose for each roofing system component. This article is not a substitute for proper live training and CAILIN recommends that only properly trained professional roofing contractors engage in the shingling of roofs. The next time you read the package instructions, you'll have a much better understanding of why roof shingles are installed the way they are.

## **Safety**

Please adhere to all recommended safe roofing practices. Wear appropriate clothing and use safety equipment such as harnesses, protective eyewear and soft-soled shoes. Use proper tools and keep the roof clear of debris. Keep a proper lookout for power cords and roof lines to avoid falling. It is recommended to use strong and stable scaffolding in lieu of ladders.



CAILIN

### Main Roof Tile

<p>DRAGON TEETH ASPHALT SHINGLE</p>		<p>Length:1000mm ± 3mm Width:333mm ± 3mm Thickness:2.6mm ± 0.1mm Pack:21pieces per bundle</p>
<p>FISH SCALE ASPHALT SHINGLE</p>		<p>Length:1000mm ± 3mm Width:333mm ± 3mm Thickness:2.6mm ± 0.1mm</p>
<p>GOETHE ASPHALT SHINGLE</p>		<p>Length:1000mm ± 3mm Width:333mm ± 3mm Thickness:2.6mm ± 0.1mm</p>
<p>MOSAIC ASPHALT SHINGLE</p>		<p>Length:1000mm ± 3mm Width:333mm ± 3mm Thickness:2.6mm ± 0.1mm</p>
<p>LAMINATED ASPHALT SHINGLE</p>		<p>Length:1000mm ± 3mm Width:333mm ± 3m Thickness:5.2mm ± 0.1mm</p>
<p>3 TAB ASPHALT SHINGLE</p>		<p>Length:1000mm ± 3mm Width:333mm ± 3mm Thickness:2.6mm ± 0.1mm</p>

## Installation Tools

**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.

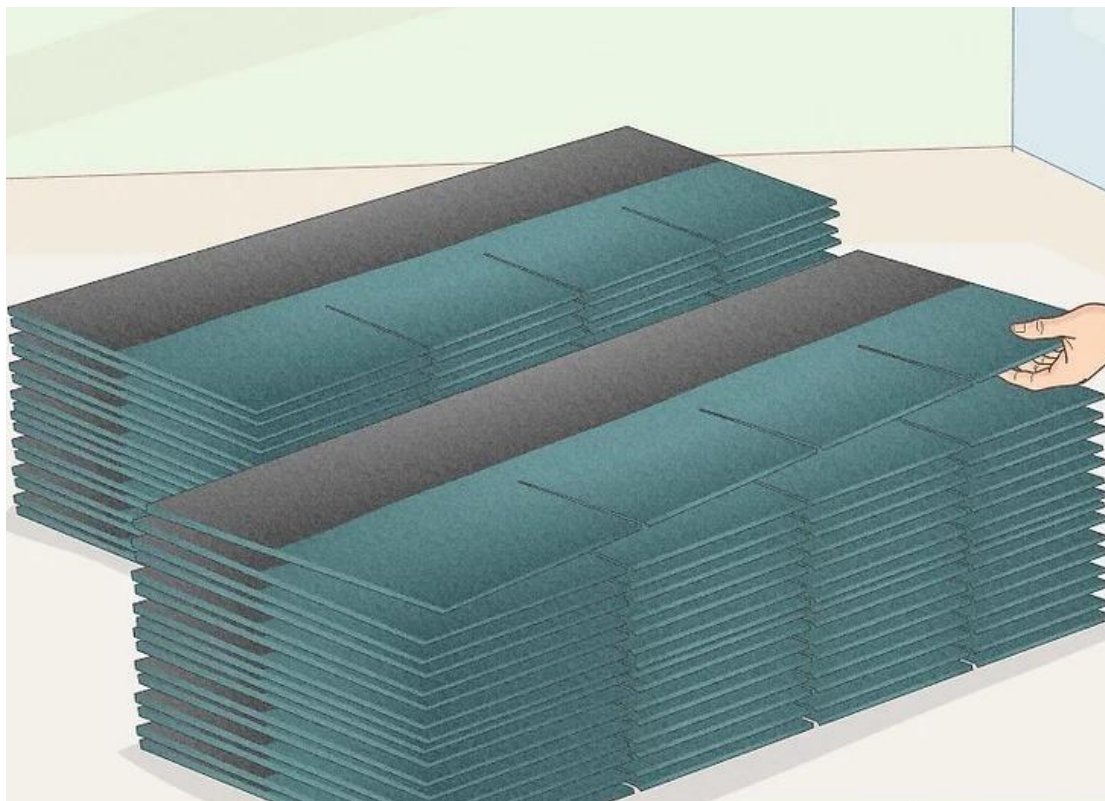
**Nails** - must be galvanized, 11-or 12 gauge, with heads at least 3/8" in diameter.

**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.

## Installation Steps of Asphalt Shingle Roof

### 1. Prepare the CAILIN Asphalt Shingle Roof



It generally takes three bundles of shingles to cover 100 square feet (9.29 square meters). Asphalt shingle "bundles" are actually sealed in packages (the term bundle comes from wooden shingles which actually came tied up with wire in bundles). Measure your roof and buy appropriately.

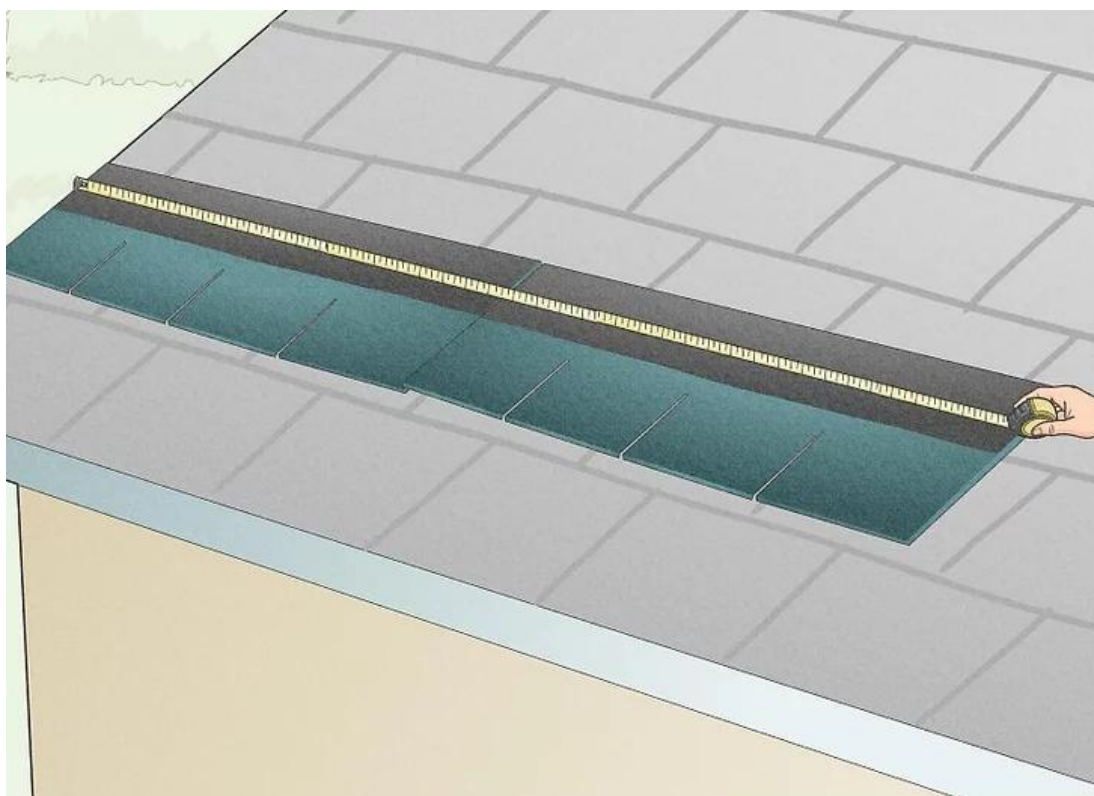
Measure the length and width of the individual sections of the roof, multiplying them together to determine the area. Add the areas of each section together, then divide by 100 to get the correct number of squares. Multiply this number by 3 to get the number of bundles you'll need to buy.

### 2. Measure the length of a shingle as it lies across the roof

This will help determine how the shingles will lay on the roof width. Most asphalt shingles are 3 feet (91.4 centimeters) in length. If your roof's width is not an even multiple of the shingle's length, you will have a partial piece on one end of each row.

The bottom row of shingles must hang past the edge of the roof. For a wood shingle

roof you would have to cut the shingles that go on the edge to create a straight line to accommodate this.



### **3. Remove old shingles and flashing**

Start removing the shingles at the peak farthest from the trash container or the corner you want to collect the shingles in. Use a garden fork or a roofing shovel to pull them off quickly, use the hammer-method and go by hand for a more thorough job. Make sure that you protect the sides of the house and the windows during this process, like by leaning a large piece of plywood against the house below where you are working. Otherwise you might break a window or damage the siding.

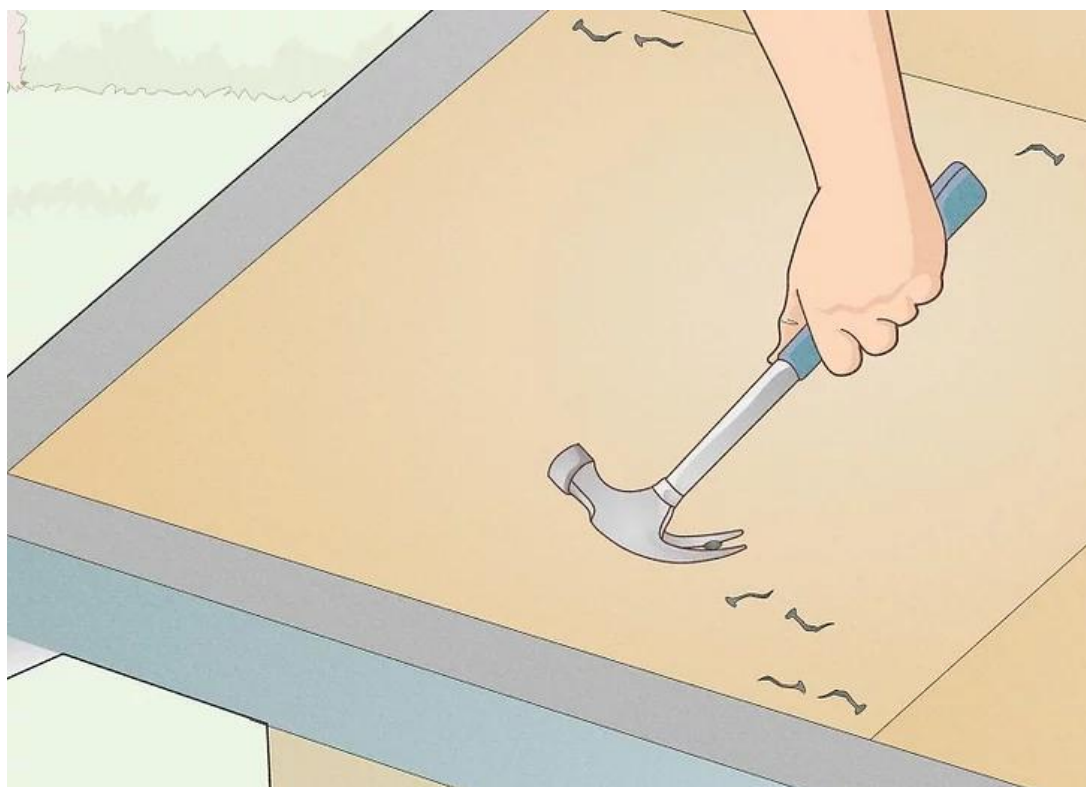
Pry up the nails and loosening the ridge caps. It's okay if you don't get all the nails at first because you'll have a chance to go back through and remove them later.

Remove the metal flashing around chimneys, vents, and valleys in the roof. Flashing in the valleys will almost always be trashed especially. Some roofers will keep some of the flashing that's in good shape but it's probably worth junking it all when you've got the chance.



#### 4. Clean the roof

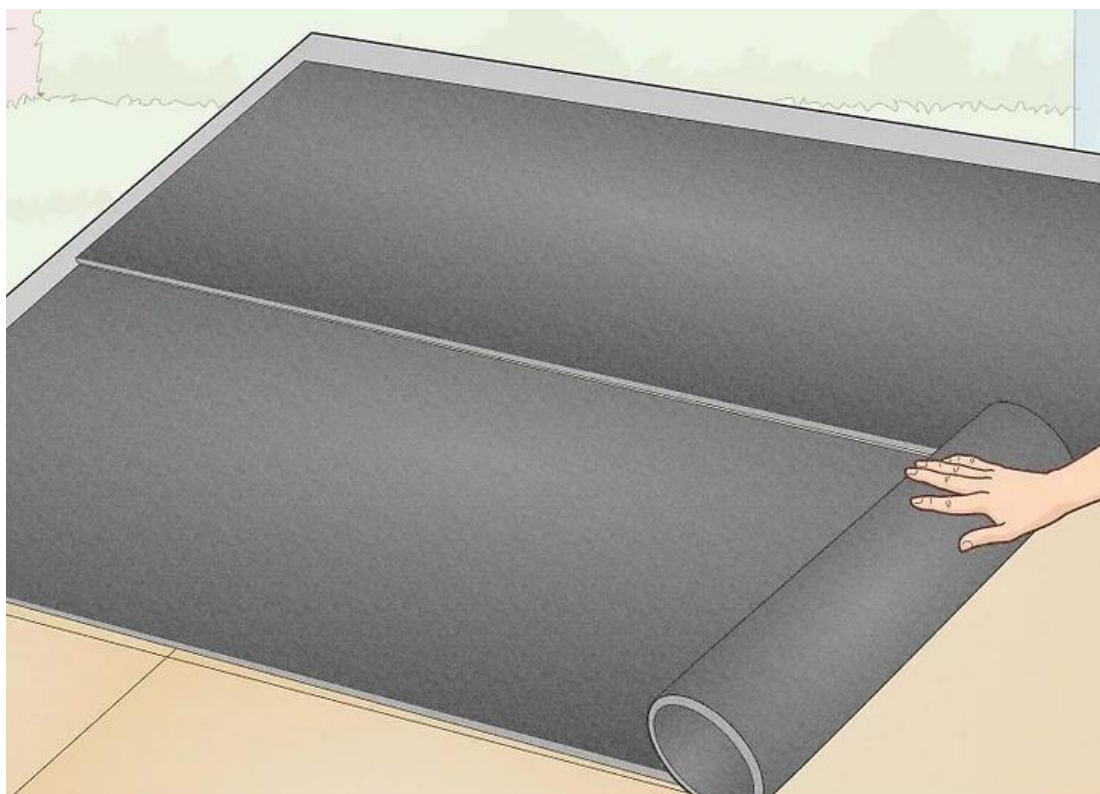
Sweep the roof as clean as possible. Remove nails that didn't come up earlier. Reattach loose boards in the sheathing. Examine the sheathing for damage and rotted



boards, replacing the damaged sections.

## 5. Install underlayment and new flashing

Lay asphalt, felt-paper, or special waterproof underlayment, such as a self healing membrane, over the roof. Some roofers will use 15-pound (6.8 kg) roofing paper, which is an effective method, although the best method is a self sealing membrane with a rain screen. Staple this felt down, starting at the lowest point of your roof and working upward. Overlap each row at least 3 inches. Use plenty of staples and work carefully to avoid tearing the paper. Be generous with the staples while attaching the paper to the roof deck. Use "tin caps" under staples if the roof may be exposed to wind before shingles are to be applied.



Use sticky back ice and water shield as underlayment where ice dams, leaf and twig dams are likely to build up, and at valleys or where the roof ends at a wall (wide metal flashing may also be used there).

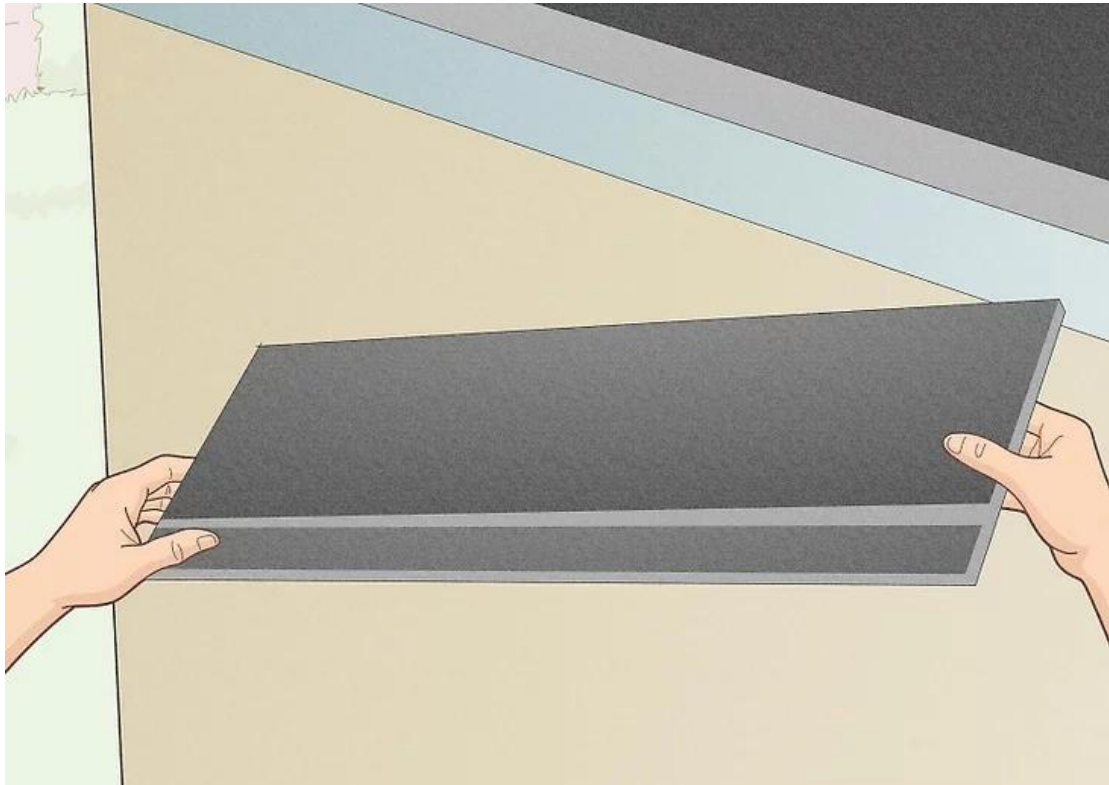
Install new flashing. Nail metal flashing called "drip edge" along the bottom edge of the roof deck near the gutters. You will also need rake edge flashing for the sides of the roof. Make sure to install flashing around the chimneys and walls. These types of



flashing are known as step flashing and turn back flashing.

## 6. Choose the kind of starter course you will use

You can use narrow tab-less starter shingles if you bought some (GAF Pro-Start is one such brand) or will be cutting your own starter shingles to fit the particular project. Some people like to only have to buy one variety of shingle and cut them to fit, while others prefer the ease of the pre-cut starter shingles without tabs.



## 7. Use chalk lines to make a guide for yourself

Depending on the type of shingles you're using and the roof you're working on, you may need to marking a chalk guideline beginning 7 inches (17.8cm) from the bottom roof edge. In either case, the glue strip of the starter course is then placed along the drip edge and at the rake edges as well.

Mark from the left to right edge of the roof so the chalk line will be seen immediately above each course as a guideline. Continue to chalk additional guidelines based on the width of the shingle through at least four courses (rows) across the roof. When you are laying felt paper, make sure that the lines on the paper are running in a square pattern.

## 8. Start laying asphalt shingle roof

Nail the "cut off shingle" into place, about 6 inches from its lower edge. Hammer in one nail about 2 inches from each end of each shingle and another nail about 1 inch above each cutout. Make sure to keep nails out of the tar strip as you work.

The next shingles above should cover the nails by about 1 inch vertically. Horizontally, end nails will be covered by up to about 1/2 of a tab, of the shingle(s) above. Be sure that these nails will hold the top edge of the course of shingles immediately below.



## 9. Put a full shingle up against the cut shingle and nail into place

Repeat this basic pattern, alternating shingles across the roof, working toward the right side, using the chalk line to keep the shingles straight horizontally.

Use 4 nails per shingle and 6 nails on the prevailing windward sides of the roof, as wind resistance nailing. Some local codes require the 6 nails on all sides.

## 10. Installing Ridge Shingles

Bend the last course of shingles over the ridge, up to about 6 inches, and nail it onto the other side so that the roofing extends over the top of the ridge, where nails will be

covered, leaving no exposed nails. However, do not do this if a ridge vent system is being installed as well. Nearly all modern roofs use ridge venting – the sheathing stops short on each side. End your final shingle row here, using the hook-blade for cutting. To cover the ridge, install vented cap shingles or continuous ridge vent.

Bend single tabs (or special ridge shingles) over the ridge, beginning at the end putting a bead of asphalt under the first ridge shingle to hold down the tab. Nail it where the next ridge shingle will cover the nails about an inch horizontally and vertically.



## 11. Install the ridge shingles

With the asphalt granules exposed, across to the other end, nail the shingles on both sides of the ridge as before. Cut off the asphalt nail line from a ridge shingle when you get to the other end.



## 12. Apply a heavy bead of asphalt cement

Dot the cement under and around the edge of the last ridge shingle where you removed the nail line. Nail at the four corners to the end of the ridge and add a little dab of tar to cover the nail heads.

Also apply asphalt cement over the nail heads exposed on the last ridge shingle to prevent water leaks.

