

Separating Myths From Reality About Nailing GAF Laminated Shingles



Myth #1: “High” nailing (or stapling) results in shingle blow-offs

Reality: Wrong! UL997 testing on GAF shingles shows that blow-offs are a problem **only if the self-seal has not yet engaged**; results are poorest when the shingles have been nailed in the Overlap Area.

Proof: Wind Uplift Test* Results, *Prior To Sealing*

	Where Fastened		
	Traditional Fastening Line	Overlap Area	Upper Fastening Area
Tab lift occurs at...	60 mph	45 mph	45 mph
Does shingle tearing occur?	No (tested up to 110 mph)	Yes, at 90 mph	Yes, at 110 mph
Does blow-off occur?	No (tested up to 110 mph)**	Yes, at 110 mph	No (tested up to 110 mph)**

*Tested under controlled laboratory conditions

**Tabs lift, but shingle does not blow off

Myth #2: High nailing (or stapling) leads to backer slippage

Reality: Wrong! Testing of GAF shingles on roofs with less than 12/12 pitch shows that **fastening position does NOT affect backer slippage** (this is largely due to the special, high-strength laminating adhesive used on GAF shingles; results on other shingle brands may be different.)

Proof: Backer Slippage Test Results

	Where Fastened					
	Traditional Fastening Line		Overlap Area		Upper Fastening Area	
	Pre-Self Seal	Post-Self Seal	Pre-Self Seal	Post-Self Seal	Pre-Self Seal	Post-Self Seal
Results at <12/12 pitch	Pass	Pass	Pass	Pass	Pass	Pass

Myth #3: High nailing (or stapling) can encourage water infiltration

Reality: It depends. Water infiltration *can* occur if **the nails are applied in the Overlap Area**, because the Overlap Area is prone to tearing if the nails are overdriven (which is often the case in nail gun installations).

Proof:

Fastening on the Traditional Nailing Line:
Both layers secured; no leakage



Fastening in the Overlap Area:
Can result in shingle tearing & leakage, which is excluded from shingle warranty



Fastening in the “Upper Fastening Area”
Holds shingle in place until self-seal engages; provides acceptable results in most instances



Myth #4: Horizontal nail location must be exact for proper shingle performance

Reality: Wrong! GAF has *always* allowed flexibility in the horizontal placement of fasteners, and years of field experience prove that it does not affect performance.

*If temperature is below 40°F, shingles must be hand sealed (see GAF application instructions for details).

Conclusions And Recommendations:

- **Fastening on the Traditional Fastening Line...** Always your best and safest choice
- **Fastening in the Upper Fastening Area...** Acceptable for maximum 12/12 pitches*
- **Fastening in the Overlap Area...** should **ALWAYS** be avoided to reduce the risk of blow-off, backer slippage, and water infiltration!

Announcing... Expanded Fastening Options For Timberline® Shingles!



(Applies to Timberline shingles that have three fastening lines, as shown here)

Optional "Upper Fastening Area" For
**ACCEPTABLE
INSTALLATION***
Maximum 12/12 Roof Pitch

Opcional "Area de Sujetacion Superior" para
**INSTALACION
ACEPTABLE***
12/12 maximo pendiente de techos

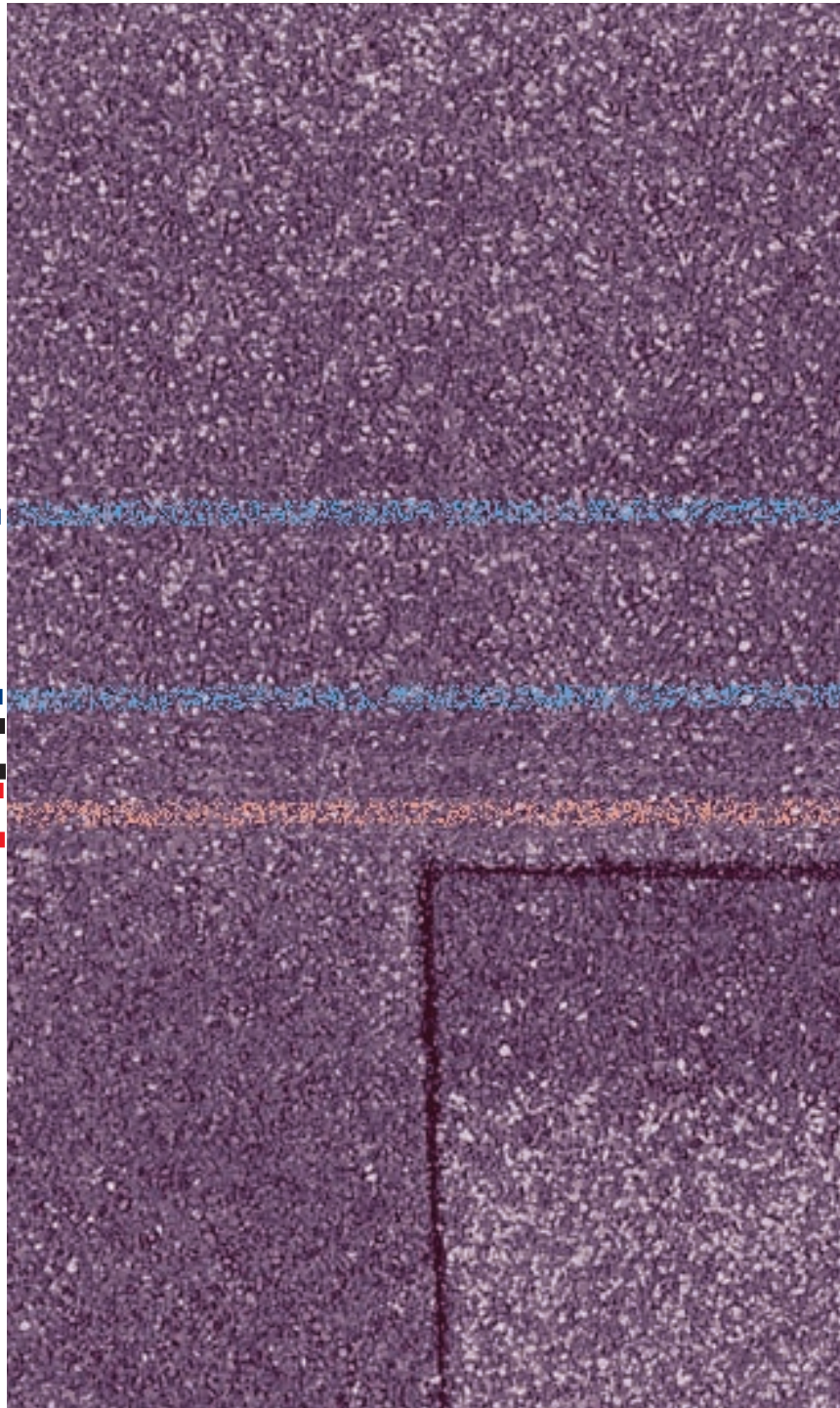
**AVOID
FASTENING HERE!**

(Vulnerable "Overlap Area" where the bottom layer of the shingle ends)

¡EVITE Sujetando Aqui!
("Area de Traslapo" vulnerable donde se termina el refuerzo del shingle)

Use The "Traditional Fastening Line" For
**BEST
INSTALLATION***
On Any Roof Pitch

Use esta linea para la
**MEJOR
INSTALACION***
Cualquier Pendiente



*If temperature is below 40°F, shingles must be hand sealed (see GAF application instructions for details).
Si la temperatura esta debajos de 40 grados de Farenheit, las tejas del techo deben de ser selladas a mano
(Favor de ver instrucciones de aplicaciones de GAF para mas detalles)



Shadow Accent™
TIMBERLINE[®] Ultra[®]
 SHINGLES

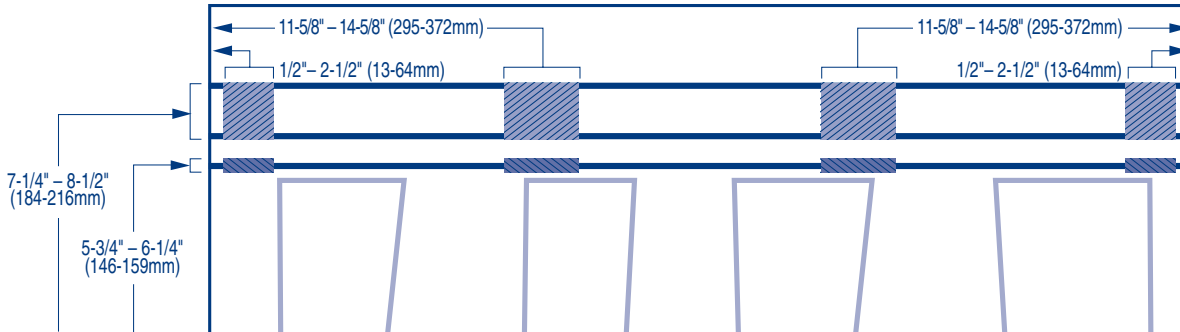
Shadow Accent™
TIMBERLINE[®] 40[®]
 SHINGLES

Shadow Accent™
TIMBERLINE[®] 30[®]
 SHINGLES

APPLICATION INSTRUCTIONS

Timberline - Four Nail Pattern

(Applies to Timberline shingles that have three fastening lines as shown here)
 Metric Size Shingle: 13-1/4" x 39-3/8" (337-1000mm)



Acceptable Installation:
 Apply fasteners within shaded areas
 (For maximum 12/12 roof pitch*)

Fasteners must NOT touch edge of double ply on bottom side of shingle

Best Installation:
 Apply fasteners within shaded areas*
 (Fastener must NOT be exposed)

*If temperature is below 40° F, shingle must be hand sealed (see GAFMC application instructions for details)

Require A Six Nail Fastening Pattern?

Use the directions above with the following modification: Replace the inner two fastening locations with four fastening placements. Place two fasteners 8" from either end (+/- 1"), and place two additional fasteners 16" from either end (+/- 1").

NOTE: DADE COUNTY It is always correct to use the application instructions on the shingle wrapper. However, for the most up-to-date approvals and application instructions visit www.gaf.com.

GENERAL INSTRUCTIONS

- **ROOF DECKS:** For use on new or reroofing work over well-seasoned, supported wood deck, tightly-constructed with maximum 6" (152mm) wide lumber, having adequate nail-holding capacity and smooth surface. Plywood decking as recommended by The Engineered Wood Assn. is acceptable. Where a Class A rating is required over decks less than 15/32" thick, an underlayment is required. **Do not** fasten shingles directly to insulation or insulated deck unless authorized in writing by GAFMC. Roof decks and existing surfacing material must be **dry** prior to application of shingles.
- **UNDERLAYMENT:** Underlayment beneath shingles has many benefits, including preventing wind driven rain from reaching the interior of the building and preventing sap in some wood decking from reacting with asphalt shingles. Underlayment is also required by many code bodies. Consult your local building department for its requirements. Where an underlayment is to be installed, a breather-type underlayment such as GAFMC's Shingle-Mate[®] underlayment is recommended. Underlayment must be installed flat, without wrinkles.
- **FASTENERS:** There are 2 fastening locations on these shingles. The traditional lower fastening line is preferred under all circumstances since it results in both layers of the laminations being held by the fastener. Local building departments may also require this fastening location. Fastening at this location is **required** on roof slopes greater than 12" per foot. Use of nails (rather than staples) is recommended. Use only zinc coated steel or aluminum, 10-12 gauge, barbed, deformed or smooth shank roofing nails with heads 3/8" (10mm) to 7/16" (12mm) in diameter. Fasteners should be long enough to penetrate at least 3/4" (19mm) into wood decks or just through the plywood decks. Fasteners must be driven flush with the surface of the shingle. Over driving will damage the shingle. Raised fasteners will interfere with the sealing of the shingles. Where not restricted by code, and for maximum slopes of 12:12, the upper two lines may be used to guide nail placement per drawing above. If the temperature is below 40° F, shingles **must** be hand sealed (see WIND RESISTANT/HAND SEALING).
- **WIND RESISTANT/HAND SEALING:** These shingles have a special thermal sealant that firmly bonds the shingles together after application when exposed to sun and warm temperatures. Shingles installed in Fall or Winter may not seal until the following Spring. If shingles are damaged

by winds before sealing or are not exposed to adequate surface temperatures, or if the self-sealant gets dirty, the shingles may never seal. Failure to seal under these circumstances results from the nature of self-sealing shingles and is not a manufacturing defect. To insure immediate sealing, apply 4 quarter-sized dabs of shingle tab adhesive on the back of the shingle, 1" (25mm) and 13" (330mm) in from each side and 1" (25mm) up from bottom of the shingle. The shingle must be pressed firmly into the adhesive. For maximum wind resistance along rakes, cement shingles to underlayment and each other in a 4" (102mm) width of asphalt plastic roof cement.

NOTE: Application of excess tab adhesive can cause blistering of the shingle. The film strips on the back of each shingle are to prevent sticking together of the shingles while in the bundle. Their removal is NOT required during application.

- **CANADIAN COLD WEATHER APPLICATIONS:** CSA A123.5-M90 mandates that shingles applied between September 1 and April 30 shall be adhered with a compatible field-applied adhesive. See Wind Resistant for GAF Materials Corporation's recommendations for the application of that adhesive.

- **MANSARD AND STEEP SLOPE APPLICATIONS:** For roof slopes greater than 21" (1750mm/m) per foot (do NOT use on vertical side walls), shingle sealing must be enhanced by hand sealing. After fastening the shingle in place, apply 2 quarter-sized dabs of shingle tab adhesive as indicated in Wind Resistant above. The shingle must be pressed firmly into the adhesive.

- **EXPOSURE:** 5-5/8" (143mm)

- **THROUGH VENTILATION:** All roof structures must be provided with through ventilation to prevent entrapment of moisture laden air behind roof sheathing. Proper ventilation is also necessary to help prevent mold growth. Ventilation provisions must at least meet or exceed current F.H.A., H.U.D. or local code minimum requirements.

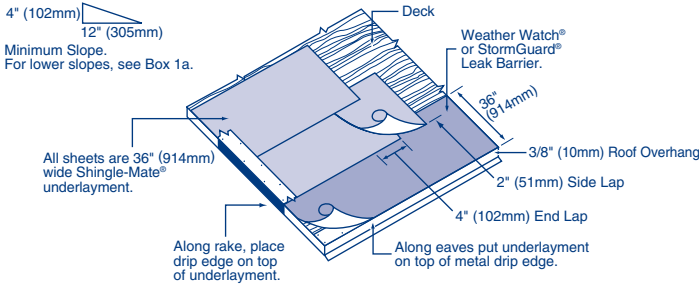
- **NON-CORRODING METAL DRIP EDGES:** Recommended along rake and eave edges on all decks, especially plywood decks.

- **ASPHALT PLASTIC CEMENT:** For use as shingle tab adhesive. Must conform to ASTM D4586 Type I or II.

1 Underlayment: Standard Slope—4/12 (333mm/m) or more

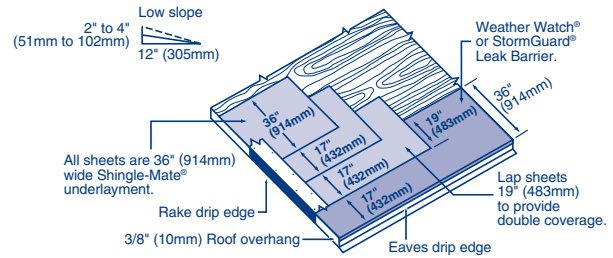
Application of underlayment: Cover deck with one layer of underlayment installed without wrinkles. Use only enough nails to hold underlayment in place until covered by shingles.

Application of eave flashing: Install eave flashing such as GAFMC Weather Watch® or StormGuard® Leak Barrier in localities where leaks may be caused by water backing up behind ice or debris dams. Eave flashing must overhang the roof edge by 3/8" (10mm) and extend 24" (610mm) beyond the inside wall line.



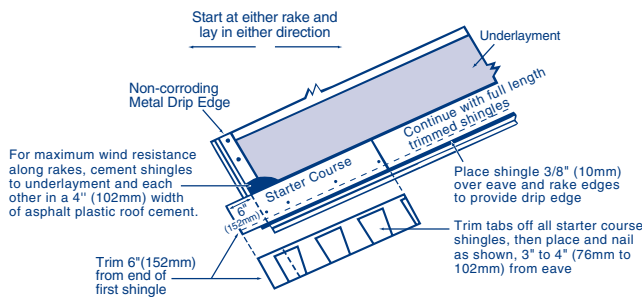
1a Underlayment: Low Slope 2/12-4/12 (167mm-333mm/m)

Application of underlayment and eave flashing: Completely cover the deck with two layers of underlayment as shown. Use only enough nails to hold underlayment in place until covered by shingles. Use blind nailing for eave flashings. At eaves and where ice dams can be expected, use one layer of GAFMC Weather Watch® or StormGuard® Leak Barrier. Eave flashing must overhang the roof edge by 3/8" (10mm) and extend 24" (610mm) beyond the inside wall line. Where ice dams or debris dams are not expected, install 2 plies of Shingle-Mate® underlayment.



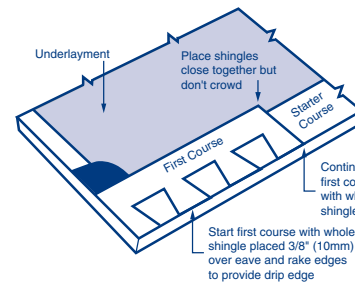
2 Starter Course

Apply as shown.



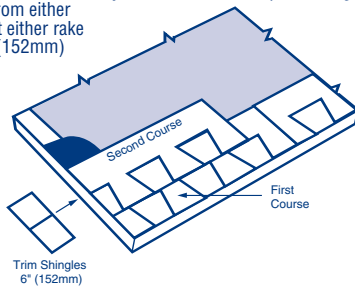
3 First Course

Start and continue with full shingles laid flush with the starter course. Shingles may be laid from left to right or right to left. DO NOT lay shingles straight up the roof since this procedure can cause an incorrect color blend on the roof and may damage the shingles.



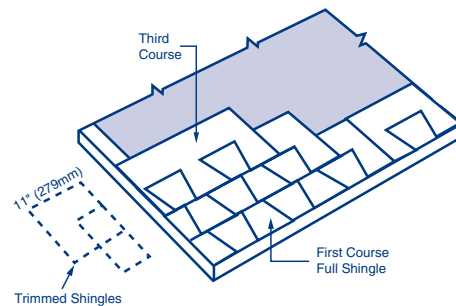
4 Second Course

Start and continue second course as shown. Trim 6" (152mm) from the end of the shingle. Position the shingles in the second and subsequent courses flush with the tops of the wide cutouts. This results in a 5-5/8" (143mm) exposure. Continue with full width shingles across the roof. Strike a chalk line about every 6 courses to check parallel alignment with eaves. NOTE: Shingles may be laid from either left or right hand side. Start at either rake edge with shingles having 6" (152mm) trimmed from rake.



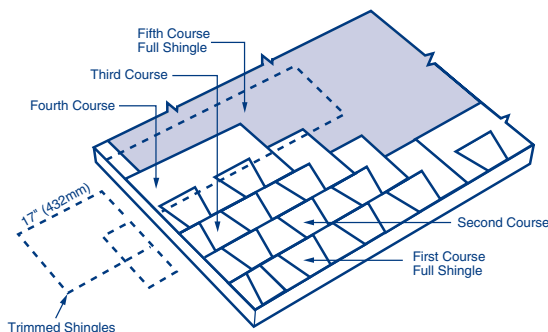
5 Third Course

Trim 11" (279mm) from the first shingle in the course then continue with full shingles across the roof.



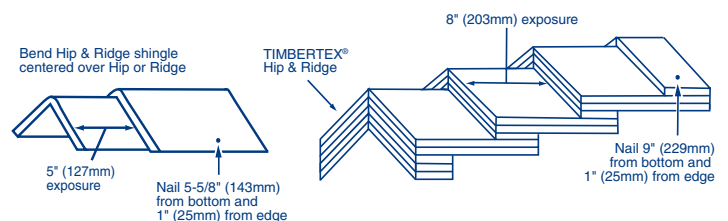
6 Fourth Course and Remaining Courses

Trim 17" (432mm) from first shingle in the course, then continue with full shingles across the roof. Fifth and subsequent courses repeat full shingle instructions from Step 3.

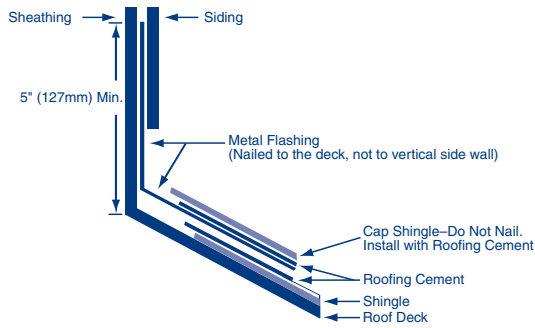


7 Hip and Ridge

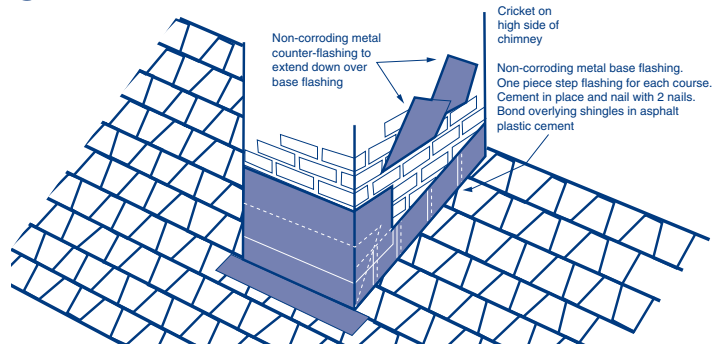
For single layer application, use hip and ridge shingles and apply as shown. To enhance appearance, use GAF TIMBERTEX® or a double layer application of Universal Hip & Ridge. (One bundle of TIMBERTEX® Hip & Ridge covers 20 lineal ft.—6.1 meters.) For double application, start with triple thickness of precut Hip & Ridge shingles and continue remainder with double thickness. Fasten in same manner as single application shown. Apply laps away from prevailing wind direction. Follow application instructions on TIMBERTEX® wrapper.



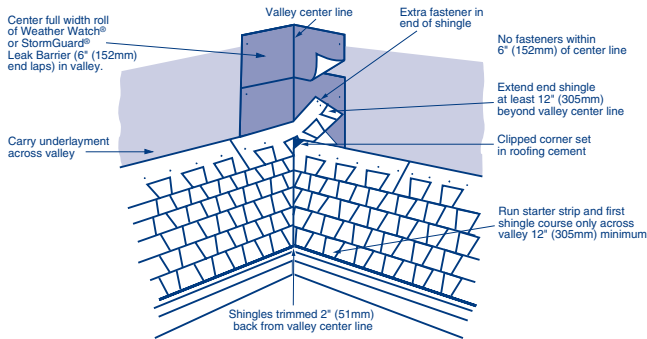
8 Wall Flashing (Sloped Roof to Vertical Wall)



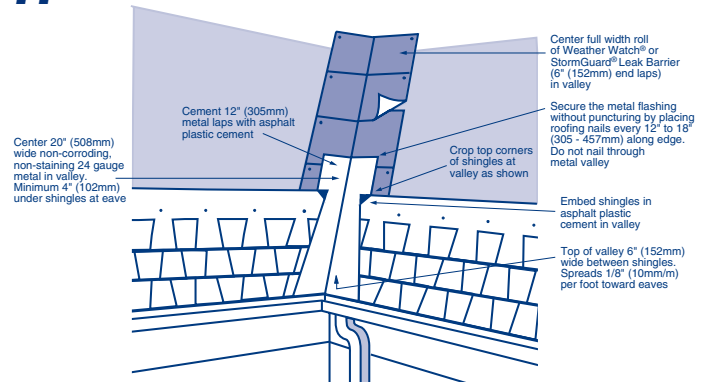
9 Chimney Flashing



10 Valley Construction—Closed Cut



11 Valley Construction—Open



Precautionary Notes

Timberline® Series shingles are fiberglass, self-sealing asphalt shingles. Because of the natural characteristics of the high quality waterproofing material used, these shingles will be stiff in cold weather and flexible in hot weather.

1. Do not drop bundles on edge, over the ridge, or on other bundles to separate shingles.
2. Handle carefully. Shingles can easily be broken in cold weather or their edges damaged in hot weather.
3. All exposed materials must be of Class A type.
4. Store in a covered, ventilated area—maximum temperature 110°F (43°C). Store on flat surface and use weight equalization boards if pallets are to be double stacked. Shingles must be protected from weather when stored at job site. Do not store near steam pipes, radiators, etc., or in sunlight. All rolled product must be stored on ends.
5. If shingles are to be applied during PROLONGED COLD periods or in areas where airborne dust or sand can be expected before sealing occurs, the shingles MUST be hand sealed. See Wind Resistant instructions.

IMPORTANT: Repair leaks promptly to avoid adverse effects, including mold growth.

Re-Roofing

If old asphalt shingles are to remain in place, nail down or cut away all loose, curled or lifted shingles; replace with new; and just before applying the new roofing, sweep the surface clean of all loose debris. Since any irregularities may show through the new shingles, be sure the underlying shingles provide a smooth surface. Fasteners must be of sufficient length to penetrate the wood deck at least 3/4" (19mm) or just through plywood. Follow other above instructions for application. *Note:* Shingles can be applied over wood shingles when precautions have been taken to provide an acceptable smooth surface. This includes cutting back old shingles at eaves and rakes and installing new wood edging strips as needed. Make surface smooth and use beveled wood strips if necessary. Install #30 underlayment to maintain Class A rating.

This product is sold with an express LIMITED WARRANTY only. A copy of the LIMITED WARRANTY stating its terms and restrictions is printed on the product wrapper or may be obtained from the distributor of this product or directly from GAF Materials Corporation. Any deviation from printed instructions shall be the responsibility of applicator and/or specifier.