



# APPLICATION INSTRUCTIONS

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#### GETTING READY FOR THE JOB

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#### **1.1 - TOOLS AND MATERIALS**

##### **A – Tools :**

- Tape measure ;
- Chalk line ;
- Carpenter's square ;
- Hammer (claw hammer, roofer's hatchet, or pneumatic nailer) ;
- Utility knife to cut roll roofing and felts ;
- Tin snips to cut metal flashing and shingles ;
- Caulking gun ;
- Notched trowel ;
- Old work gloves and nail apron ;
- Circular saw and chisel to repair or replace damaged decking ;
- Square-mouth shovel for removing old shingles;
- Pry-bar for lifting hard-to-reach shingles and flashings ;
- 8 mm or 10 mm (5/16" or 7/16") nylon or polypropylene rope to secure the ladder and use as a safety line ;
- Safety harness ;
- A strong, safe ladder or scaffolding ;

- Cutting board to prevent accidentally cutting through the shingle into the roof below ;
- Waste receptacle ;
- Broom for cleaning up afterwards.

##### **B – Materials :**

- BP Shingles ;
- Galvanized roofing nails of proper length ;
- Asphalt Plastic Cement ;
- Eave protection (GRIPGARD, GRIPGARD SX or PROGARD ULTRA Waterproofing membrane, BP Smooth or Slate Surface Roll Roofing) ;
- Underlayment (GRIPGARD, GRIPGARD SX or PROGARD ULTRA Waterproofing Membrane, BP n°15 Asphalt Felt Plain, BP Standard Asphalt Sheathing or BP Shingle Base Underlayment) ;
- BP Slate Surface Roll Roofing, BP Mineral Surface Roll Roofing, GRIPGARD, GRIPGARD SX, PROGARD ULTRA or MINI PROGARD Waterproofing membrane for valley treatment or flashings ;
- Roof ventilators.

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## 1.2 - STORING SHINGLES

From the time of delivery to the time of their installation, the roofing materials may have to be stored. To protect your investment and ensure optimal results, bear in mind these few recommendations:

- Store shingles on a flat surface ;
- Don't store shingles in the hot sun or leave them exposed to bad weather; If the shingles must be stored outdoors, protect them with a tarpaulin or plastic sheet; Be sure to make a few holes in the sheets to allow for air circulation ;
- Don't store shingles in extreme cold, especially prior to cutting or bending ;
- Don't store the bundles directly on the ground; place them on a raised platform ;
- Never stack shingle bundles more than 1.2 m (4') high.

## 1.3 - SAFETY CONSIDERATIONS

The roof can be a dangerous place to work, so read the following section carefully and take the necessary precautions to avoid any risk of accident.

The primary, and most obvious, danger is that of falling. If you have difficulty walking on the roof, it is probably too steep for you to work on safely.

First and foremost, make sure that you are fastened safely. A safety harness with a large snap hook can be obtained from your local tool rental center for this purpose. Fasten the harness around your waist and clip it to a nylon or polypropylene rope 8 mm to 10 mm (5/16" to 7/16") in diameter. The other end of the rope should be tied to a solid, immovable object on the other side of the roof. A strong tree or a 5 cm x 10 cm (2" x 4") board placed across the inside of a window frame provide reliable anchors for this purpose, but don't tie the rope to your car, TV antenna or chimney. Make a series of non-slip loops, at 1.2 m to 1.8 m (4' to 6') intervals between your harness and the ridge. As your work progresses across the roof you can attach the safety harness to these loops. Use short lengths of hose or rubber to protect the rope

from friction where it rubs against the ridge and eaves.

### TO AVOID ELECTROCUTION

- Keep ladders and other metal objects away from electrical wires and make sure you don't come into contact with the wires yourself ;
- Don't try to remove a TV antenna by yourself. Most antenna distributing companies will handle this for you, but if not, arrange to have somebody else help you and exercise extreme caution. Above all, keep the antenna away from electrical wires.

### WHEN WORKING WITH A LADDER

- Use a sturdy ladder and ;
- Make sure it extends at least 61 cm to 91 cm (2' to 3') above the roof level so that you can hold on to the rails while climbing on and off the roof ;
- Secure both sides of the ladder at the top and at the bottom ;
- Don't lean too far away from the ladder to reach the next section of roof. It is safer to move the ladder.

### GENERAL SAFETY GUIDELINES

- Try not to work alone on the roof. If it is necessary to do so, at least let someone know ;
- Make sure that no one is standing under the roof where they could be hurt by falling objects ;
- Avoid wearing loose-fitting clothing. Do wear rubber-soled shoes and protective glasses ;
- Don't work on a wet roof. Ideally, the weather should be mild, dry and calm ;
- Make sure your ladder or scaffolding is set on a firm level base that is neither too muddy nor too dry ;



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- If you are working on a steep roof (slope of 6/12 or more), it may be necessary to build footholds. This can be easily accomplished using a flat board held in place with steel straps. On very steep slopes, a 4 cm x 9 cm (1 1/2" x 3 1/2") wood wedge can be placed under the board to provide a level foothold. The board can be moved around the roof as you work ;

- Make sure that tools and materials placed on the roof cannot slide off. Don't place heavy piles of shingles in one spot - spread the material around the roof to evenly distribute the weight ;

- Don't take any unnecessary risks.

## **1.4 - CARING FOR YOUR NEW ROOF**

Congratulations! You have bought the best shingles in the world. If you follow all the necessary steps, using high-quality premium materials and doing a professional job, you will be proud of your new roof. After the job is done, you will be able to relax knowing that your new dream roof will enhance the value and appearance of

your home. Here are a few tips to ensure you get the best possible long-term performance from your new BP roof :

- Clean out the eaves troughs from time to time, especially if there are trees nearby. Don't let dead leaves, seeds, petals, pine needles and other debris clutter the eaves troughs ;

- Don't let rainwater from downpipes spill directly into a shingle roof as water erosion may damage the surface of the shingles. Connect downpipes from upper roofs to an eaves troughs or to a lower downpipe ;

- Avoid walking on the roof, especially in cold and hot weather conditions. If it is necessary to do so, protect the shingles by wearing soft-sole shoes or by walking on boards or other appropriate materials ;

- If it is necessary to clear accumulations of snow or ice from the roof, avoid damaging the shingles when removing the snow and ice. Always leave a few inches covering the shingles and remember, a roof is dangerous, even more so in the winter. Always take necessary precautions for safety or have a roof specialist do the work.

### Building Products of Canada Corp.

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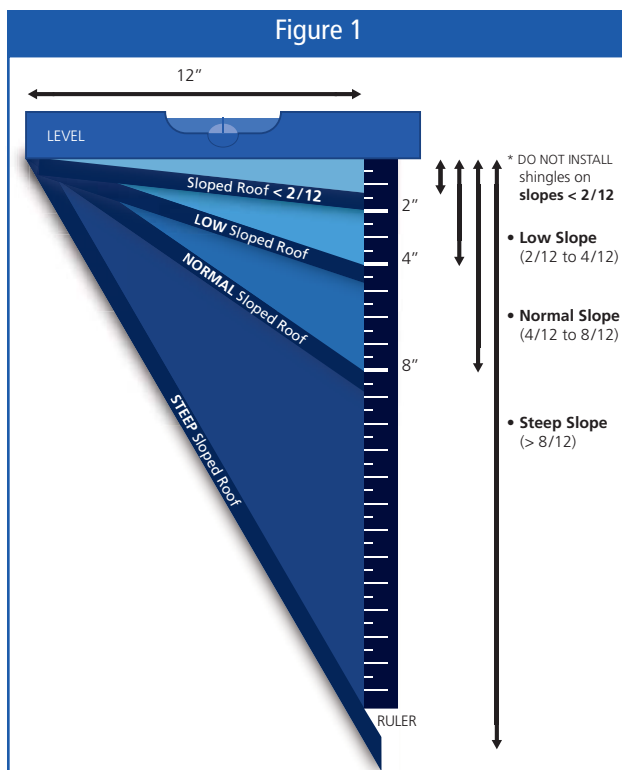


### SECTION 2

#### PREPARATION, PROTECTION OF VULNERABLE AREAS & VENTILATION

- 2.1 Slope
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- 2.4 Ventilation

#### 2.1 – SLOPE



\* Conversion :  $15/12 = [ >50^\circ - 15 \text{ in/ft}, 15:12 (1:0.8) ] = 125 \text{ cm/m}$

**Figure 1** illustrates how to determine the slope of your roof. First, place a ruler perpendicular to a well balanced level on the 12" mark. The measurement reading on your ruler corresponds to the slope of your roof.

For slopes of 2/12 to 4/12, when using BP top-of-the-line 3-tab shingles MIRAGE GS, YUKON SB, RAMPART and DAKOTA, follow the special application instructions outlined in **Section 3.3**.

For slopes of 3/12 to 4/12, BP laminate shingles EVEREST, ECLIPSE GL, MYSTIQUE and HARMONY may be installed using special application instructions outlined in **Section 3.3**.

For slopes superior to 4/12, all BP Fiberglass and Organic shingles can be installed.

**BP Shingles should not be installed on roof slopes below 2/12.**

Please refer to **Tableau 2 (a) (b)** found in **Section 3.2**.

#### 2.2 – DECK

The deck must be in good condition. It must be dry, clean, flat, smooth and securely nailed. Plywood decking is recommended. For required thickness see National Building Codes. For the U.S.A., check local building codes for minimum requirements.

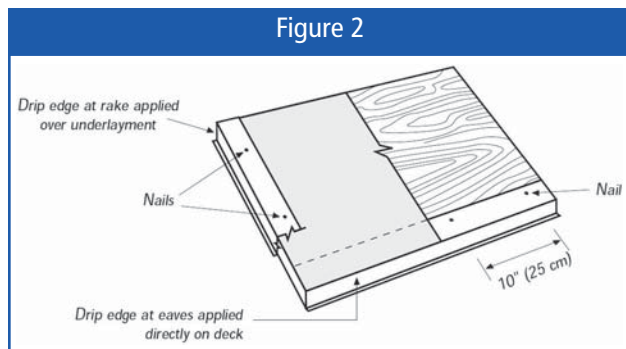
Failure to use proper decking materials can result in deck movement, which will distort or damage the overlying roofing materials. Distortion of roofing resulting from deck movement is not a manufacturing defect of the roofing product and is not covered by the warranty. Decks that are warped should be replaced as the shape will be transferred over the shingles. This is not a shingle manufacturing defect and is not covered by the warranty.

Due to the natural movement of wood caused by moisture content, varying degrees of buckling in the shingle may occur. If, however, leaking, due to buckling, occurs it is not the fault of the shingle but the roof deck itself. It is therefore recommended that plywood sheathing be applied over shiplap decks prior to installation of this shingle. Problems due to the deck will render the warranty void.

Shingles **must** not be nailed over insulation.

## 2.3 – DRIP & RAKE EDGE

A drip edge of metal (galvanized steel, sheet copper) should be applied on the eaves and rake edges. Apply the drip edge at the eaves directly to the wood deck and at the rake over the underlayment. Nail every 20 cm to 25 cm (8" to 10") (see Figure 2).



## 2.4 – VENTILATION

All roof structures must be provided with through ventilation to prevent entrapment of moisture-laden air beneath the deck. Minimum requirements are unobstructed vent areas of 1/300 of the total insulated ceiling area for conventional roofs, some jurisdictions as well as low slope 2/12 to 4/12 or cathedral ceilings require 1/150. Vent holes should be distributed as follows : 55% as the base of the roof (soffits) for air inflow and 45% at the ridge for air outflow.

**The shingle warranty will only be valid if all structures are provided with proper through ventilation.**

Ventilation is defined as the net free area. Consult your vent manufacturer to determine the net free area of your ventilator. Also ventilators must be placed in a way that one does not impede the effectiveness of the others.

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#### GENERAL INSTRUCTIONS

##### 3.1 General Directions

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- H - Ventilation

##### 3.2 Eave Protection & Underlayment

- A - Eave Protection
- B - Underlayment

##### 3.3 Shingle Application on Low Sloped Roofs

##### 3.4 Shingle Application on Standard Sloped Roofs

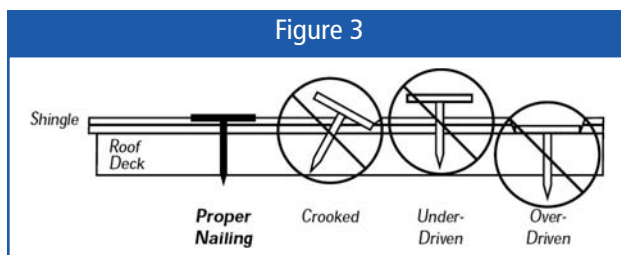
##### 3.5 Valley Preparation

##### 3.6 Flashing

### 3.1 – GENERAL DIRECTIONS

#### A – Nail Requirements :

Use 10 to 12 gauge galvanized nails with a minimum 9 mm (3/8") head for all types of shingles. Nails must be long enough to penetrate a minimum of 19 mm (3/4") into solid wood deck or just through the plywood deck. **Do not use staples to fasten shingles.** Raised nails can result in shingle distortion and may prevent sealing. Drive nails until they are flush with the surface; do not overdrive nails. Do not nail in the adhesive strip : this may prevent shingles from sticking together (see Figure 3).



#### B – Cement :

Use an Asphalt Plastic Cement which conforms to CAN/CGSB 37.5-M89 and/or ASTM D-4586 Type I to ensure compatibility. Cement must be applied only with a comb or notched trowel in a thin (less than 2 mm or 1/16" thick) even coating. Overuse of cement can damage the shingles.

**IMPORTANT :** Shingles have a factory applied adhesive that is activated thermally. Certain conditions will hinder the effectiveness by which the adhesive keeps the shingle tabs down to prevent wind blow-offs.

#### SEAL DOWN SHINGLE TABS IF SHINGLES ARE INSTALLED :

- In high wind areas ;
- On a steep sloped and mansard roof 15/12. Please refer to **Section 3.1-D** and see **Figure 4** ;
- At a temperature that will not activate the self-seal adhesive, BP recommends that hand sealing should be done from September 21st to March 21st. Please refer to **Section 3.1-F** ;
- In areas subject to high dust conditions.

After nailing, seal shingle tabs. Seal by applying a dab of Asphalt Plastic Cement no larger than the size and thickness of a 25 cent piece – or a 1.6 cm (5/8") bead, 2mm (1/16") thick at each bottom corner of every tab on all shingles so that the lower edge of the dab is at least



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2.5 cm (1") above the bottom of the overlying shingle. All shingles must be pressed firmly into the cement. Do not use excessive cement.

### C – Protective Tape :

Do not remove parting strip of protective tape from the shingle underside. Its purpose is to prevent the shingles from sticking together while in the bundle. It does not affect the application or the effectiveness of the product.

### D – Application on mansard and steep slope roofs :

The maximum slope considered suitable for normal shingle application is 15/12. Use six (6) nails per shingle instead of four. Place them 14 cm (5 1/2") from the bottom edge of the shingle as follows : one nail 2.5 cm (1") back from each end, one nail 27 cm (10 1/2") back from each end and one 34 cm (13 1/2") back from each end for a total of six nails. After nailing, apply a small spot of Asphalt Plastic Cement, larger than the size and thickness of a 25¢ piece - or a 16 mm (5/8") bead, 1.5 mm (1/16") thick - under the bottom corners of each tab so that the lower edge of the dab is at least 2.5 cm (1") above the bottom of the overlying tab. Excess application of cement can cause blistering. Cement location is 2.5 cm (1") and 30 cm (12") in from each end for a total of four dabs for laminate shingles and six dabs for 3-tab shingles. Shingles must be pressed firmly into cement (see Figure 4 and 5).

### E – High Wind Warranty Installation :

To qualify for High Wind Warranty, which warrants against wind damage or shingle displacement for winds between 130 km/h (80 mph) and 210 km/h (130 mph),

Figure 4

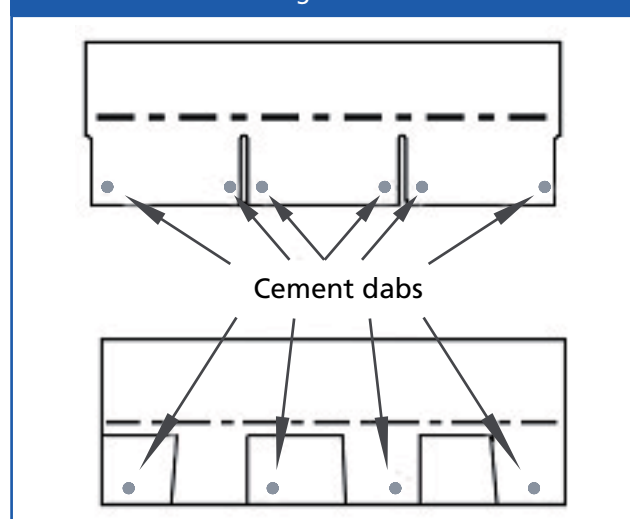
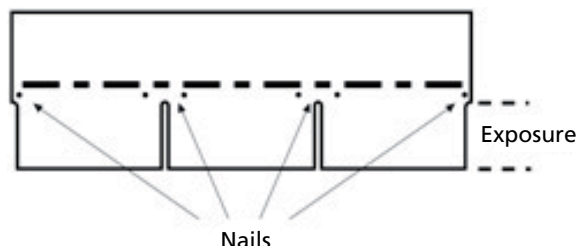
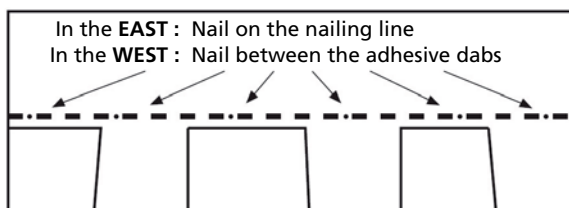


Figure 5

### 3-TAB SHINGLES :



### LAMINATE SHINGLES :



shingles must be fastened using 6 nails and all shingles located at the roof edges must be cement together in a 10 cm (4") wide layer of plastic cement. If above special application instructions are not followed, shingles will be warranted for winds from 115 km/h (70 mph) to 140 km/h (90 mph). See Table 1 for High Wind Warranty wind speed for the shingle being installed.

Table 1

Shingles	Regular Wind Warranty	High Wind Warranty
• Eclipse GL	140 km/h (90 mph)	210 km/h (130 mph)
• Everest	130 km/h (80 mph)	175 km/h (110 mph)
• Harmony • Mystique	115 km/h (70 mph)	175 km/h (110 mph)
• Rampart • Yukon SB • Mirage GS • Dakota	115 km/h (70 mph)	130 km/h (80 mph)

### F – Cold Weather Application :

Shingles have a factory applied adhesive which is thermally activated. The self-seal adhesive must be subjected to sufficient heat to activate the bond. When the shingles are installed in environmental conditions that will not produce such temperature or in very windy



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areas, the shingles should be sealed down with spots of Asphalt Plastic Cement under each tab as specified in CSA A123.51-M85. BP recommends that hand sealing should be done from September 21 to March 21. Please refer to **Section 3.1-B** and see **Figure 4** for proper cementing method.

## **G – Installing Over Existing Layer of Shingles :**

Old roof must be dry and provide smooth surface. Replace all damaged, curled, broken, buckled or loose shingles. To ensure a smooth even surface, sweep the old roofing prior to the installation. Fasteners must be of sufficient length to penetrate deep enough in the wood deck. Apply new shingles using butt-edge (nesting) application method where the top of the new shingle is nested against the bottom of the exposed portion of the old roofing shingle.

Multiple layers installation must be done in accordance with local bylaws and building code requirements ; load restrictions must be considered when applying more than one layer of roofing material.

When trying to decide whether you should apply asphalt shingles over old shingles, use the following checklist to ensure you meet the requirements for multiple layer installation :

- Make sure the deck can support an additional layer of shingles. The question of weight is more critical if the original roof deck is thinner than the standards recommended in the current building code or if it is unsound in any way. Some local ordinances forbid re-roofing over two or more layers of shingles because of the danger of overloading the supporting structure. Check your local building code ;
- Verify the underside of the deck. Boards that are warped or rotten must be replaced and those boards that are loose must be properly nailed. Decks that are warped or otherwise unsound preclude multiple layer installation and should be replaced ;
- Check that the old roof system does not have moisture retention problems and will meet minimum ventilation requirements, once an additional layer of shingles has been installed. There may be requirements to increase ventilation of the attic space ;

- Check the condition of the old shingles. If the old shingle surface is anything other than smooth and flat, cut and nail down buckles, raised tabs or curled edges. Remove or drive in any protruding nails. Defects in the old layer of shingles may telegraph through the new layer. Building Products of Canada Corp. will not be responsible for appearance problems related to multiple layer installation, such problems being typical of this type of installation;

- Remember if adding a second layer, you will need longer nails to ensure that you nail into the roof deck ;

- The hip & ridge shingles of an existing roof on which new shingles are to be installed must be removed before application of new shingles.

## **H - Ventilation :**

All roof structures must be provided with through ventilation to prevent entrapment of moisture-laden air beneath the deck. Ventilation provisions must meet or exceed current National Building Code requirements. In the U.S.A., check local building codes for minimum requirements. In general, as specified in most building codes, for a low-slope roof or one with cathedral ceilings, every roof space or attic above an insulated ceiling must be ventilated with openings to the exterior to provide an unobstructed vent area of not less than 1/300 of the total insulated ceiling area. This ratio does not apply for all roofs. A low slope roof or one with cathedral ceilings requires twice (2x) the ventilation or a ratio of 1/150. The vents used may be roof-type vents, eave-type vents, gable-end type vents or any combination, and should be uniformly distributed to ventilate each roof space. When calculating the net free area (unobstructed open area), be sure to factor in any obstacle to free air circulation such as screens, grids, louvers, blades, etc. There must be at least 8 cm (3") of space between the insulation in the attic and the deck. If insulation was added to the deck without leaving space for air flow, the ventilated soffit might not be able to do the job it was intended to do.

**The shingle warranty will only be valid if all roof structures are provided with proper through ventilation.**



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### **3.2 – EAVE PROTECTION & UNDERLAYMENT**

#### **A - Eave Protection :**

Apply a non-corroding metal drip edge at the eaves (see **Section 2.3**). Next, install the eave protector; GRIPGARD, GRIPGARD SX or PROGARD ULTRA, starting at the drip edge. Be sure to :

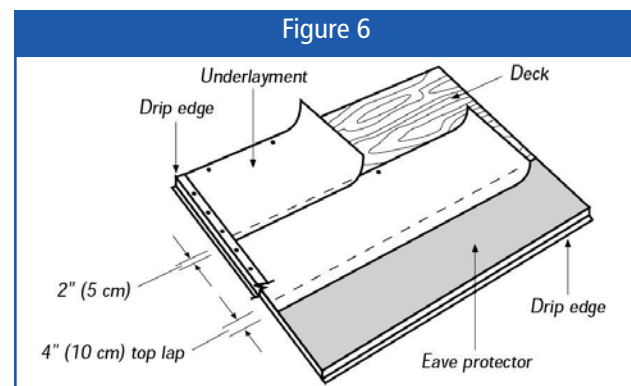
- 1] Cut PROGARD ULTRA into lengths of 3 m to 4.5 m (10' to 15') ;
- 2] Align this material along the edge of the roof and re-roll ;
- 3] Peel back about 30.5 cm (12") of release film backing and adhere the peeled area. Re-roll to the adhered portion ;
- 4] Pull on the release film backing to unroll PROGARD ULTRA and press the material into place to ensure tight bond. If the membrane deviates from the roof line, cut and start as above mentioned procedure ;
- 5] Starting at the low point of the roof, work upward. Apply PROGARD ULTRA by laying the roll horizontally and extending up the roof, from the eaves, to a point at least 30.5 cm (12") beyond the interior wall line. On low slope roofs 2/12 to 4/12 PROGARD ULTRA must be extended a minimum of 61 cm (24") beyond the inside surface of the exterior wall. This requirement may vary depending on location. Check your local building code for minimum requirements ;
- 6] End laps must be a minimum of 15.2 cm (6"), side laps a minimum of 7.6 cm (3") for GRIPGARD, GRIPGARD SX and a minimum 5.1 cm (2") for PROGARD ULTRA ;
- 7] For GRIPGARD, the end laps must be sealed down with a 10 cm (4") wide, thin and uniform layer of Asphalt Plastic Cement.

#### **B – Underlayment :**

If you want to meet fire-resistant ratings, the use of underlayment is mandatory under Fiberglass based shingles. Refer to **Table 2 (a) (b)** for underlayment requirements for BP Shingles.

The purpose of shingles is to shed water as well to protect against rain which can periodically be driven under shingles. Thus, even when an underlayment is optional, its use over entire roof deck is strongly recommended. Underlayment consists of n°15 Asphalt Felt Plain or BP Standard Asphalt Sheathing laid horizontally over the deck and must be applied over the entire roof deck.

The underlayment should be installed over the entire deck surface, with the length perpendicular to the eave. Use BP n°15 Plain Asphalt Felt or BP Standard Asphalt Sheathing. Overlap sheets over 10 cm (4") horizontally and 15.2 cm (6") vertically (voir **Figure 6**). Nail sufficiently to hold the underlayment in place until the shingles are applied. Install shingles as soon as possible after installation of the underlayment. Building Products of Canada Corp. recommends installing the shingles the same day as the underlayment, to keep it from being wet or wrinkled. If underlayment is used to waterproof over a long period of time, it should be visually inspected to ensure it is not wet, wrinkled or otherwise damaged. If it is, it should be discarded and replaced by a new approved underlayment.



### **3.3 – LOW SLOPE APPLICATION**

The following application instructions must be followed when MIRAGE GS, YUKON SB, RAMPART or DAKOTA are installed on roof slopes between 2/12 to 4/12 or when ECLIPSE GL, EVEREST, HARMONY or MYSTIQUE shingles are installed on roof slopes between 3/12 to 4/12. Please refer to **Section 2.1**.

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## Underlayment Requirements for BP Shingles

### Fiberglass Shingles :

Table 2 a					
Slope	Shingles	Eave Protection		Underlayment	
		Minimum	Products	Minimum	Products
* 2/12 – 4/12 Low Slope	<ul style="list-style-type: none"> <li>• Dakota</li> <li>• Yukon SB</li> <li>• Mirage GS</li> </ul>	REQUIRED : 24" past inner face of exterior wall	<ul style="list-style-type: none"> <li>• Grippard</li> <li>• Grippard SX</li> <li>• Progard ULTRA</li> </ul>	REQUIRED : 2 Plies n°15 Plain Felt over entire roof surface	<ul style="list-style-type: none"> <li>• Grippard</li> </ul>
* 3/12 – 4/12 Low Slope	<ul style="list-style-type: none"> <li>• Eclipse GL</li> <li>• Everest</li> <li>• Mystique</li> <li>• Harmony</li> </ul>				
4/12 – 6/12 Standard Slope	All Fiberglass Shingles	REQUIRED : 12" past inner face of exterior wall	<ul style="list-style-type: none"> <li>• Grippard</li> <li>• Grippard SX</li> <li>• Progard ULTRA</li> <li>• Smooth Surface</li> <li>• Plain n°30</li> </ul>	REQUIRED : 1 Ply n°15 Plain Felt over entire roof surface	<ul style="list-style-type: none"> <li>• Grippard SX</li> <li>• Progard ULTRA</li> </ul>
6/12 – 8/12 Standard Slope				RECOMMENDED : 1 Ply n°15 Plain Felt over entire roof surface	<ul style="list-style-type: none"> <li>• Plain n°15</li> </ul>
8/12 + Steep Slope		RECOMMENDED : 12" past inner face of exterior wall			

### Organic Shingle :

Table 2 b					
Slope	Shingle	Eave Protection		Underlayment	
		Minimum	Products	Minimum	Products
* 2/12 – 4/12 Low Slope	Rampart	REQUIRED : 24" past inner face of exterior wall	<ul style="list-style-type: none"><li>• Grippard</li><li>• Grippard SX</li><li>• ProGard ULTRA</li></ul>	REQUIRED : 2 Plies n°15 Plain Felt over entire roof surface	<ul style="list-style-type: none"><li>• Grippard</li></ul>
4/12 – 8/12 Standard Slope		REQUIRED : 12" past inner face of exterior wall	<ul style="list-style-type: none"><li>• Grippard</li><li>• Grippard SX</li><li>• Progard ULTRA</li></ul>	RECOMMENDED : 1 Ply n°15 Plain Felt over entire roof surface	<ul style="list-style-type: none"><li>• Grippard SX</li><li>• Progard ULTRA</li></ul>
8/12 + Steep Slope		RECOMMENDED : 12" past inner face of exterior wall	<ul style="list-style-type: none"><li>• Smooth Surface</li><li>• Plain n°30</li></ul>		<ul style="list-style-type: none"><li>• Plain n°15</li></ul>

\* Special application required for low sloped roofs. Please refer to Section 3.3



# APPLICATION INSTRUCTIONS

## ASPHALT SHINGLES

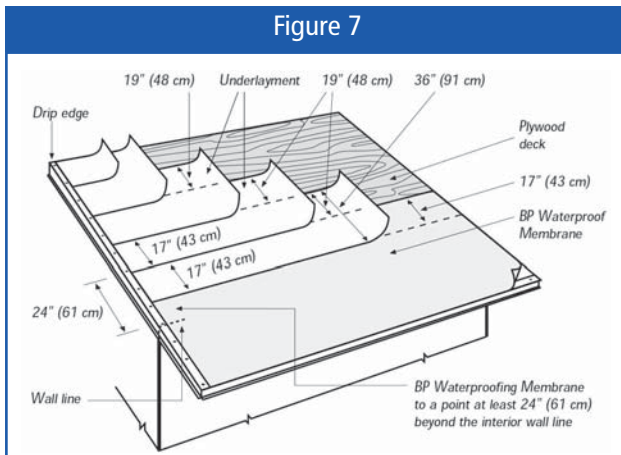
### Method 1 :

As described for normal slopes, for optimum protection against water penetration, use a single ply of GRIPGARD, GRIPGARD SX or PROGARD ULTRA over the entire wood deck. They are strong, self-adhesive, roofing membranes are applied by peeling off the release / film paper backing as it is unrolled.

Starting at the low point of the roof, apply GRIPGARD, GRIPGARD SX or PROGARD ULTRA by laying the roll horizontally. End laps must be a minimum of 15 cm (6"). Each succeeding course should be lapped 7.6 cm (3") over the preceding, lower course. Felt underlayment is not required when PROGARD ULTRA is installed over the whole roof.

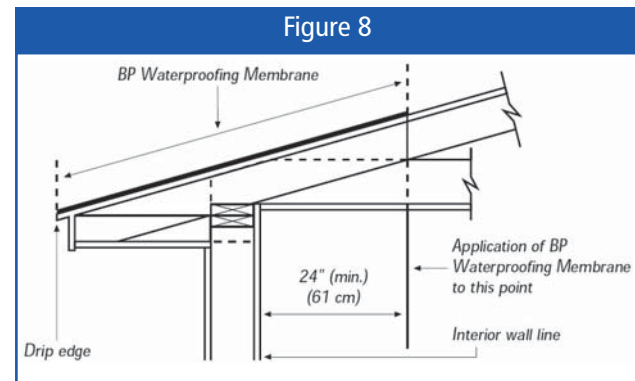
### Method 2 :

Eave protection consists of a single ply of GRIPGARD, GRIPGARD SX or PROGARD ULTRA Waterproofing Membrane laid horizontally and extending up the roof, from the eaves to a point at least 61 cm (24") beyond the interior wall line. End laps must be a minimum of 15 cm (6"). If more than one width is required, overlap the second course 10 cm (4") over the first (see Figure 7).



Next, install the underlayment. This calls for a double layer of BP n°15 Asphalt Felt Plain or BP other roofing asphalt felt underlayment. Lay horizontally over the rest of the roof. Underlayment must be applied over the entire roof deck. Start with a 91 cm (36") wide sheet overlapping GRIPGARD, GRIPGARD SX or PROGARD ULTRA by 43 cm (17"). Apply a second 91 cm (36") sheet, overlapping the first one 48 cm (19"), leaving 43 cm (17") exposed. Thereafter, 91 cm (36") sheets are laid, each to overlap the upper 48 cm (19") of the

preceding course, until the rest of the roof deck has been covered. Each course of felt is nailed towards its upper edge with only enough nails to hold it in place until the shingles are applied (see Figure 8).



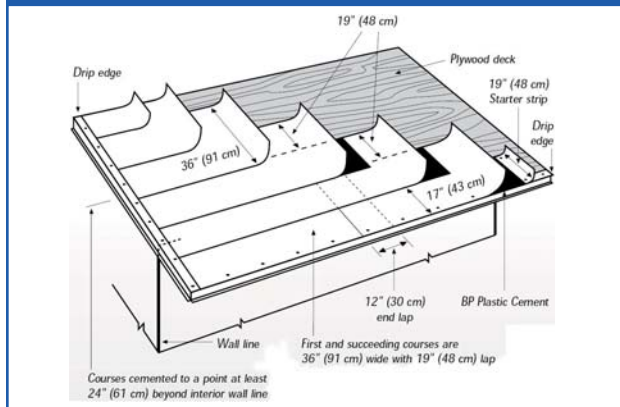
### Method 3 :

This special procedure calls for an eave protection made up of a double layer of BP n°15 Asphalt Felt Plain or BP Standard Asphalt Sheathing which is both cemented and nailed in the eaves and nailed only over the rest of the roof. Start application with a 48 cm (19") wide starter course of felt, laid along the eaves flush with the edge of the roof. The underlayment must be cemented from the edge of the roof up to a point at least 61 cm (24") inside the interior wall line. Continue with a full width 91 cm (36") of felt over the starter course and flush with the edge of the roof, completely covering the 48 cm (19") starter course. Each course of felt in the eaves is cemented to the preceding course using Asphalt Plastic Cement, applied at the rate of 1 L/m<sup>2</sup> (1 gallon/50 ft<sup>2</sup>). A 4 kg container of Asphalt Plastic Cement will cover approximately 2.3 m<sup>2</sup> (24.5 ft<sup>2</sup>), 1.5 mm (1/16") thick. Asphalt Plastic Cement must be applied uniformly with a comb, putty knife or notched trowel so that at no point will dry felt touch dry felt. Special care must be taken to ensure that the proper amount of Asphalt Plastic Cement is applied - refer to the label. The felt is pressed firmly into the cement to ensure proper bonding. Nail sufficiently to hold it in place until the shingles are applied. Continue applying Asphalt Plastic Cement and felt this way up to a point at least 61 cm (24") inside the interior wall line. Beyond this point 91 cm (36"), sheets are laid, but without Asphalt Plastic Cement, lapping each course 48 cm (19") over the preceding one. Each course of felt is nailed sufficiently to hold it in place until the shingles are applied (see Figure 9).

# SECTION 3



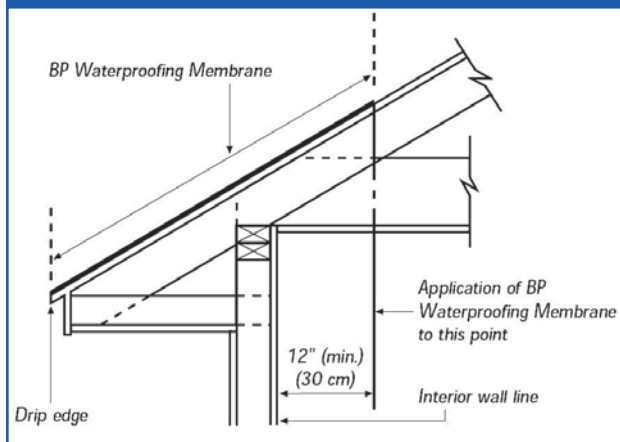
Figure 9



## 3.4 - STANDARD SLOPE APPLICATION

For slopes of 4/12 or more, best protection consists of one ply of GRIPGARD, GRIPGARD SX or PROGARD ULTRA self-sealing membrane laid horizontally from the eaves and extending up the roof to a point at least 30 cm (12") beyond the interior wall line. End laps must be a minimum of 15 cm (6"). When more than one width is required, overlap the second course 10 cm (4") over the first (see Figure 10).

Figure 10



## 3.5 – VALLEY PREPARATION

There are several types of valley construction: Open, Closed, or Woven.

### A – Open Valleys :

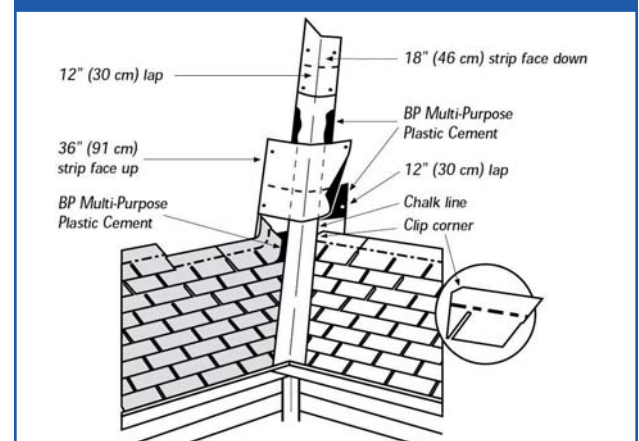
First, lay a 46 cm (18") wide strip of BP Slate Surface Roll

Roofing with the mineral surface side down in the center of the valley, from the eaves to the top of the ridge. The sheet is pressed firmly into the valley and nailed 2.5 cm (1") in from the exterior edges, using only enough nails to hold it firmly in place. Cut the bottom edge flush to the eaves of the roof. Apply 10 cm (4") wide strips of Multi-Purpose Plastic Cement to both sides of this strip. If a joint must be made, the upper section overlaps the lower by 30 cm (12") and is cemented with Plastic Cement. Next, center a 93 cm (36 3/4") wide strip of BP Slate Surface Roll Roofing (of a color matching the finished roof if possible), surface side up, on top of the previous strip. Press firmly into the cement and nail in the same manner as for the first piece. Before applying shingles, snap two chalk lines into the full length of the valley, one on each side. Start the lines 10 cm (4") on each side of the valley center at the ridge and open outwards at the rate of 1 cm/m (1/8 in/ft) as they approach the eaves, to a maximum of 20 cm (8").

Non corroding metal could be used instead of BP Slate Surface Roll Roofing. Installing a layer of GRIPGARD, GRIPGARD SX, PROGARD ULTRA or MINI PROGARD Waterproofing Membrane in the valley, beneath the metal, will ensure maximum protection and prevent condensation.

When applying the shingles, lay them down to the edge of these chalk lines and cut to fit. Cut off the top corner of each end shingle at an angle, to prevent water from penetrating between the roofing courses. Cement the shingles at the chalk lines with a 7.6cm (3") width of Asphalt Plastic Cement to seal them and nail down (see Figure 11).

Figure 11







# APPLICATION INSTRUCTIONS

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### B – Closed Valleys :

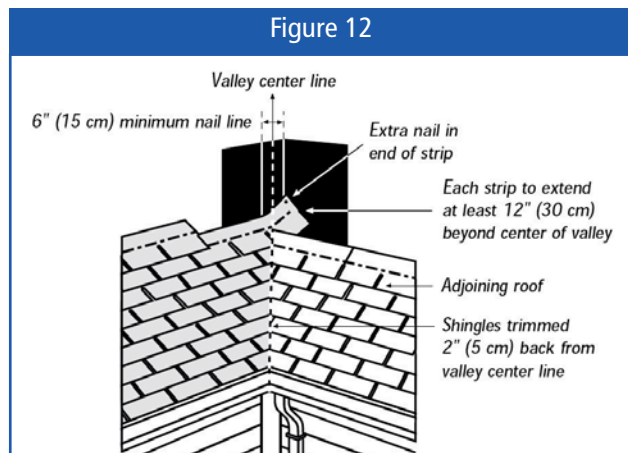
Closed or woven valleys are preferred where slopes are steeper and where specifications call for valley protection using shingles. In these valleys, shingles on the adjacent slopes are butted or woven together.

In closed valleys, the valley is completely covered with shingles, but the shingle courses are not woven together. A single 91 cm (36") wide flashing strip of BP Slate Surface Roll Roofing, GRIPGARD, GRIPGARD SX or PROGARD ULTRA is laid down the length of the valley before the shingles are applied. Then, snap a chalk line down each side of the valley 15 cm (6") from the valley joint. Run each course of shingles from the main roof across the valley and onto the adjoining roof for at least 30 cm (12"). Nail the shingles to the roof, but keep all nails at least 2.5 cm (1") outside the chalk line on each side of the valley. Bring all the shingle courses across from the main roof, before completing the courses on the adjoining roof.

Before installing shingles on the adjoining roof, snap a chalk line 5 cm (2") from the valley joint on the adjoining roof. Run each course of shingles from the adjoining roof to the 5 cm (2") chalk line and trim away the excess. Cut a diagonal piece off the upper corner of each shingle ending in the valley to provide better drainage. Nail the shingles to the roof, but keep all nails at least 2.5 cm (1") outside the chalk line. The ends of each shingle course are secured to the valley with a 7.6 cm (3") wide strip of Asphalt Plastic Cement (see **Figure 12**).

Installing a layer of GRIPGARD, GRIPGARD SX or PROGARD ULTRA Waterproofing Membrane in the valley, instead of roll roofing will ensure maximum protection.

Figure 12

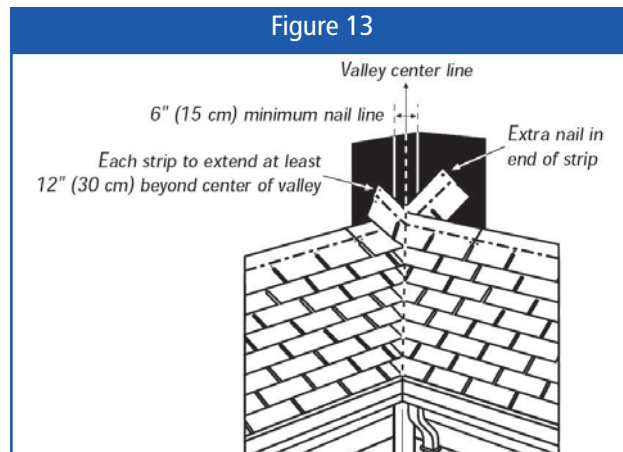


### C – Woven Valleys :

A woven valley is completely covered with shingles. Alternate shingle courses are laid across the valley and woven together. Because of the additional coverage provided by the shingles, it is not necessary to cover the valley joint with a double thickness of roll roofing. Only a single 91 cm (36") wide strip of BP Slate Surface Roll Roofing, GRIPGARD, GRIPGARD SX or PROGARD ULTRA is required. The flashing strip is laid over the underlayment.

In woven valleys, the roof shingles are first laid to a point approximately 91 cm (36") from the center of the valley on each roof slope. Snap a chalk line down each side of the valley 15 cm (6") from the valley joint. Run the first course of shingles (from the main roof) across the valley and onto the adjoining roof for at least 30 cm (12"). Nail the shingles down, but keep all nails at least 2.5 cm (1") from the chalk line. Run the first course of shingles from the adjoining roof across the valley and on to the main roof for at least 30 cm (12") and nail it in position. Remember to keep the nails at least 2.5 cm (1") outside the chalk line. Run the remaining shingle courses alternately back and forth across the valley, weaving the shingles together and nailing them in position as described above (see **Figure 13**).

Figure 13



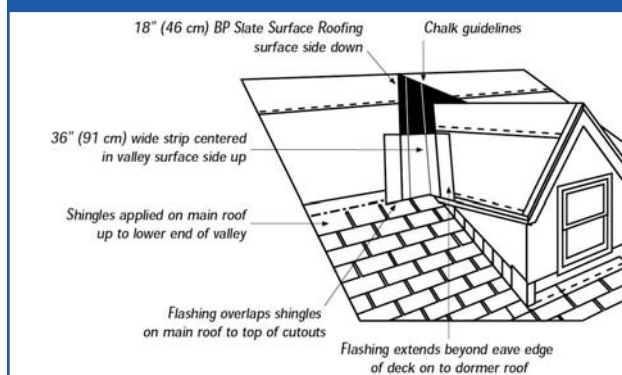
### D – Valley at dormer roof :

Open valley flashings at a dormer roof are done in exactly the same manner as any open valley flashing except that the slate roofing is brought down over the first course of shingles of the main roof to the top of the cut outs and out on to the dormer roof. Do not install valley flashing until the shingle application reaches a point just above the lower end of the valley (see **Figure 14**).

# SECTION 3



Figure 14



Installing a layer of GRIPGARD, GRIPGARD SX, PROGARD ULTRA or MINI-PROGARD Waterproofing membrane in the valley, instead of Slate Surface roll, will ensure maximum protection.

## 3.6 – FLASHING

Flashing details shall follow Building Code requirements. As required, corrosion resistant metal drip and rake edge shall be installed at eaves and rake. Chimneys, vents, etc. should be flashed in an approved manner, using approved material such as galvanized steel or sheet copper.

### A – Vertical Wall Flashing :

Each piece of metal flashing must be provided with a 7.6cm (3") side lap. This dimension and the amount of the shingle exposure will determine the width of the metal flashing piece. For example, a 13cm (5") shingle exposure will require a piece of metal flashing 20 cm (8") wide, 13cm (5") exposure plus a 7.6cm (3") side lap. Each strip is placed on top of the shingle, with the lower edge just slightly above the cut outs or above the dragon teeth of laminated shingles.

Each metal flashing piece should be long enough to extend 10cm (4") up the vertical wall, and 7.6cm (3") onto the roof deck. For the above-mentioned example, taken together, the width and length dimensions require that each metal flashing piece measure 17.5 cm x 20 cm (7" x 8").

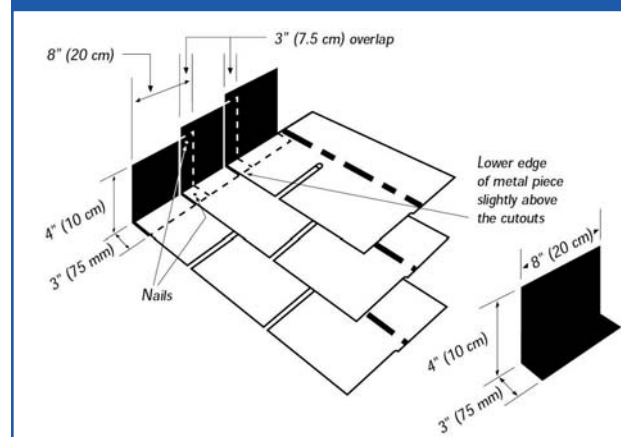
To install step flashing, place the first flashing piece over the end of the starter strip and position is so that the tab of the end shingle in the first course covers it completely. Secure the horizontal flange to the roof with two nails.

Do not nail flashing to the wall as settling of the roof could damage the seal.

Complete the first course of shingles along the roof eave, and secure the end of the last shingle to the metal flashing piece with Asphalt Plastic Cement. Do not nail through the shingle and metal flashing.

Apply the second metal flashing piece to the vertical wall sheathing and the roof deck using the same method described for the first one. Provide at least a 7.6 cm (3") side lap, but do not allow its edge to extend into the exposure for the first shingle course. On the roof deck, the metal flashing pieces must be completely hidden from view by the shingles (see Figure 15). Siding serves as cap flashing over step flashing on the vertical wall.

Figure 15



In re-roofing (application over an existing layer of shingles), ensure that the old shingles butting the wall are in good condition. Apply a strip of BP Smooth Surface Roll Roofing 20 cm (8") wide over the shingles along the wall. Nail 10 cm (4") apart along each edge of the strip. Cover with Asphalt Plastic Cement and embed the new shingles. Use a caulking gun and draw a bead of Asphalt Plastic Cement between the ends of the shingles and the siding.

Flashings should always be neatly done and color coordinated.

### B – Soil Stack Flashing :

Use either MINI-PROGARD, GRIPGARD, GRIPGARD SX, PROGARD ULTRA Waterproofing membrane, BP Smooth Surface Roll Roofing or a metal flange to flash a soil

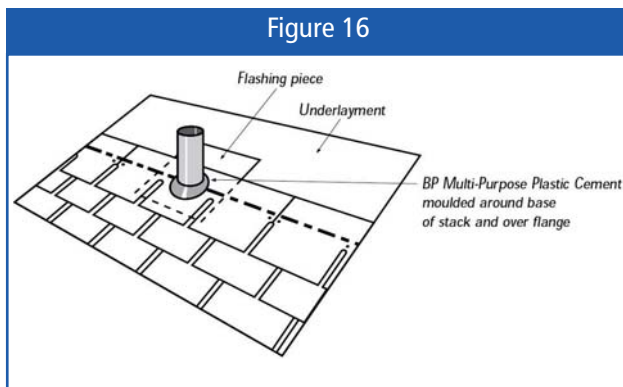


# APPLICATION INSTRUCTIONS

## ASPHALT SHINGLES

stack and lay around the soil stack before shingles are laid. Cut a piece of flashing material with a hole in it to fit just over the pipe and large enough to extend 10 cm (4") below, 20 cm (8") above and 15 cm (6") to each side of the pipe. Slip this flange over the pipe and lay it flat on the roof. Form a collar of Asphalt Plastic Cement around the pipe to plug the gap and work it in properly to obtain good adhesion of the cement to the pipe. Continue laying shingles and cement in all areas that overlap the flange (see **Figure 16**).

Flashings should always be neatly done and color coordinated.



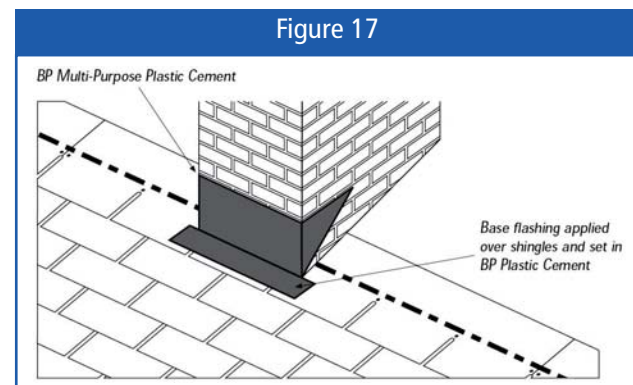
### C – Chimney Flashing :

Chimneys are built on a separate foundation than the building to avoid uneven settling. This necessitates the construction of base flashings secured to the deck and covered by cap flashings secured to the chimney to permit movement, without damage to the water seal.

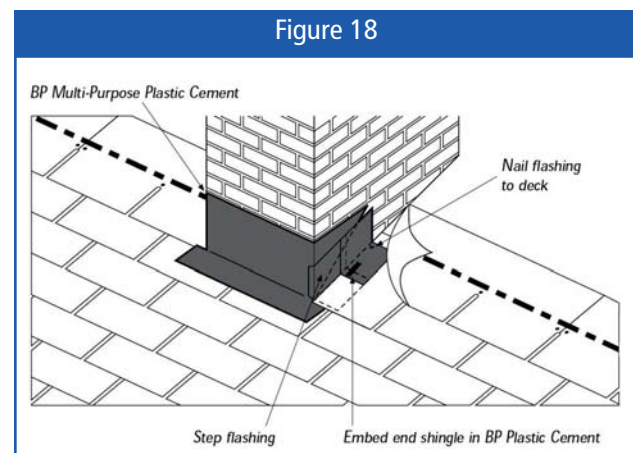
Before flashing, shingles are applied up to the lower face of the chimney. A cricket or saddle is built on the upper side of the chimney to prevent the accumulation of water or ice.

Start on the low side of the chimney and apply a strip of BP Smooth or Slate Surface Roll Roofing, cutting the edges to permit folding up the sides of the chimney. Use MINI-PROGARD, GRIPGARD, GRIPGARD SX or PROGARD ULTRA Waterproofing Membrane as a super base for the flashing material. Extend 25 cm (10") up the chimney and onto the roof to the top of the cut-outs of the last shingle course. Secure this strip to the shingles with Asphalt Plastic Cement.

Apply the metal base flashing, starting with the front of the chimney. Bend the base flashing so that the lower section extends at least 10 cm (4") over the shingles and the upper section extends at least 30 cm (12") up the vertical face of the chimney (see **Figure 17**). Secure the metal flashing to the roll roofing using Asphalt Plastic Cement. Shingle around and / or over the base flashing.



Use metal step flashing for the sides of the chimney, positioning the units in the same manner as flashing a vertical wall. Cut, bend and apply the step flashing as shown in **Figure 18** and as described in **Section 3.6-A**. Secure each flashing unit to the deck with nails. Embed the end shingles in each course that overlaps the flashing in Asphalt Plastic Cement.



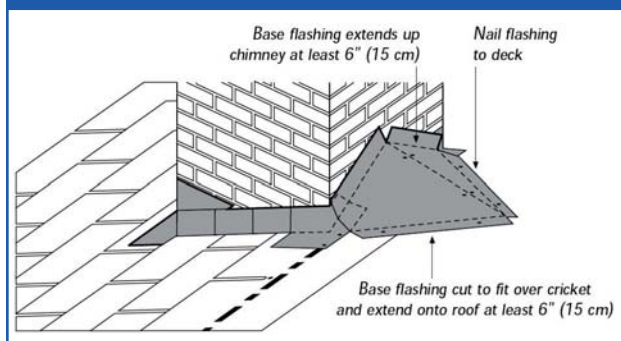
Next, cut and bend the metal base flashing to cover the cricket and extend onto the roof surface at least 15 cm (6"). It should also extend at least 15 cm (6") up the brickwork and far enough laterally to lap the step flashing on the sides (see **Figure 19**). Shingle around and/or over the base flashing.



# SECTION 3

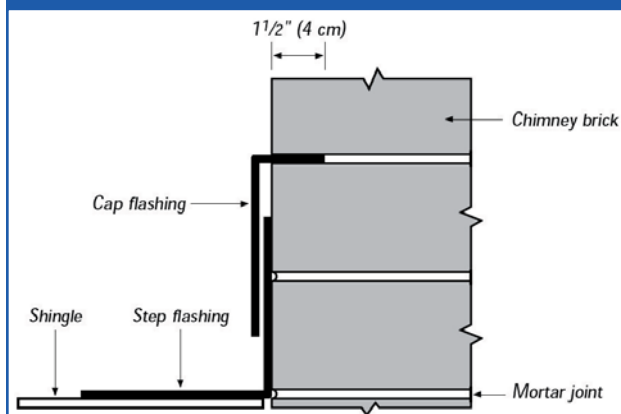


Figure 19



Cap flashings must now be placed over all base flashings for positive exclusion of water from the joint. Begin by setting the metal cap flashing into the brickwork as shown in **Figure 20**. This is done by raking out a mortar joint to a depth of 4 cm (1 1/2") and inserting the bent edge of the flashing into the cleared joint. Refill the joint with mortar or Asphalt Plastic Cement. Finally, bend the flashing down to cover the base flashing and to lie snugly against the masonry. Don't fasten through the base flashing, as the two must be allowed to move independently.

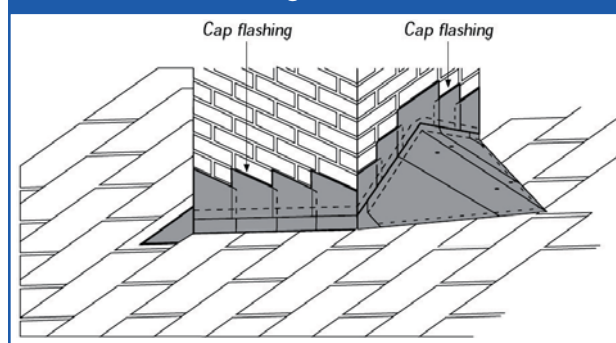
Figure 20



Use one continuous piece of cap flashing on the front of the chimney. On the sides and back of the chimney, use several pieces of similar-sized flashing, trimming each to fit the particular location of brick joint and roof pitch (see **Figure 21**). Start the side units at the lowest point and overlap each at least 7.6 cm (3"). Remember that flashings should always be neatly done and color coordinated.

Flashings should always be neatly done and color coordinated.

Figure 21



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# APPLICATION INSTRUCTIONS

## ASPHALT SHINGLES

### SECTION 4

#### THREE-TAB SHINGLES

##### 4.1 Mirage GS , Yukon SB , Dakota , Rampart

#### **4.1 - THREE-TAB SHINGLE - Mirage GS, Yukon SB, Dakota, Rampart**

Before proceeding with the installation, please refer to the following sections in this Application Instructions :

**Section 1** - Getting Ready For The Job ;

**Section 2** - Preparation, Protection of vulnerable area & Ventilation ;

**Section 3** - General Instructions.

**NOTE :** Compliance with all local safety regulations is the responsibility of the applicator. Compliance with current building code requirements is the responsibility of the applicator and the homeowner. Self-sealing hip and ridge shingles contain self-sealing adhesive strips that must be exposed to sufficient surface temperatures before full thermal sealing can occur. Shingles installed in the fall or winter may not seal until they are exposed to such periods of sufficient surface temperatures (see Section 3.1-F). In addition, contamination of the self-sealing adhesive by dust or foreign matter may prevent the sealing strip from achieving full thermal seal. Prior to sealing, shingles are more vulnerable to being blown-off or incurring wind damage.

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#### **A - GENERAL DIRECTIONS :**

- **Roof Deck**  
See Section 2.2
- **Cement**  
See Section 3.1-B
- **Installing Shingles over an Existing Roof**  
See Section 3.1-G
- **Eave Protection**  
See Section 3.2-A
- **Underlayment**  
See Section 3.2-B
- **Low Slope Application**  
See Section 3.3
- **Valley Preparation**  
See Section 3.5
- **Flashing**  
See Section 3.6

# SECTION 4



## B - Application of Shingles :

### Nailing :

Improper nailing will render the warranty null and void. The head of the nails must be driven flush to the top of the shingle surface. Raised nails can result in shingle distortion and may prevent sealing due to lack of contact with the sealant. Do not use staples to attach shingles. A minimum of four (4) nails per shingle is required for all slopes. On Mansard roofs 15/12 and up, a minimum of six (6) nails is required. Nail at 3.8 cm (1 1/2") of the shingle ends, with the other nails approximately 1.27 cm to 2.54 cm (1/2" to 1") above the cut-outs. For installation with six (6) nails, place a nail at 2.5 cm (1") from each edge, a nail at 30.2 cm (11 7/8") from each edge and another nail at 32.7 cm (12 7/8") of each edge. Do not nail on the adhesive strip. Please refer to **Section 3.1-A, Section 3.1-D, Section 3.1-E** and **Figure 5**.

### Starter Course :

1] On the deck chalk a horizontal line at 18.8 cm (7 3/8") from the lower edge of the drip ;

2] Use BP Starter Strip Shingle or cut away and discard the lower tab portion, 14.3 cm (5 5/8"), of the shingles ;

3] In order to off-set seams, cut 15,2 cm (6") off the left end of the first shingle and install with the factory applied adhesive adjacent to the eaves. Starting at the rake edge, align top edge of this piece with the chalk line. If the shingles do not overhang the eaves by 6 mm (1/4"), adjust your horizontal chalk line accordingly ;

4] Continue across the roof with full length trimmed shingles. Nail with four nails equally spaced across the shingle, à 7.6cm (3") up from the eaves (see **Figure 5**).

### First Course :

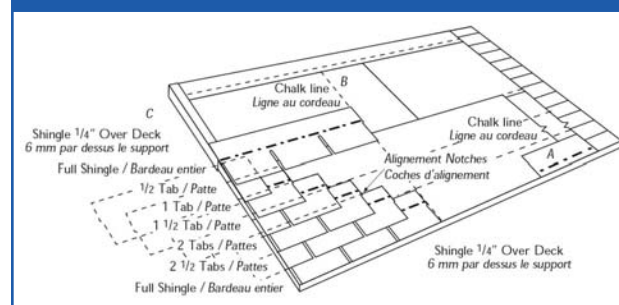
Nailing instructions (starting from the rake edge) (see **Figure 22**). On the starter course piece, nail first at 7.6cm to 10cm (3" to 4") from the lower edge and at 15.2cm (6") from the rake edge. Align horizontally all other nails, spacing them 30.5cm (12") apart. For other methods, make sure nails will not show through the cut-outs of the overlying first course shingles.

### Succeeding Courses :

Start the first course with a full shingle. Offset each shingle row by half a tab. At the 7<sup>th</sup> row, go back to the vertical line and repeat the sequence. For optimum alignment,

draw reference vertical lines every 2 m (78 3/4") to check and adjust your tab vertical alignment. Draw a horizontal line every 28.5 cm (11 1/4") in order to check and adjust your horizontal alignment (see **Figure 22**).

Figure 22



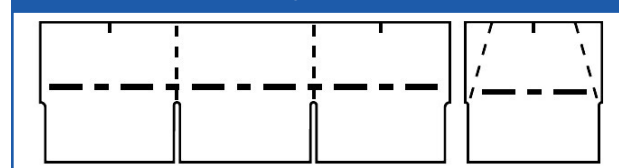
### Shingles In Valley :

When a course of shingles is applied, trim it off flush with the chalk line. Cut off the top corner of each end shingle at an angle, to prevent water from penetrating between the roofing courses. Cement shingles to the valley flashing with Asphalt Plastic Cement and nail in the normal fashion. Please refer to (see **Section 3.5**).

### Hip and Ridge Treatment :

The last course of shingles applied must have the exposed granular surface to within 14.3 cm (5 5/8") of the ridge. The headlap of the shingle is turned over the ridge and nailed on the opposite slope. When both slopes have been completed in this fashion, the ridge capping can be applied. Cut full-size shingles into 3 equal parts to make capping. Cut off both corners of each section at an angle (see **Figure 23**).

Figure 23

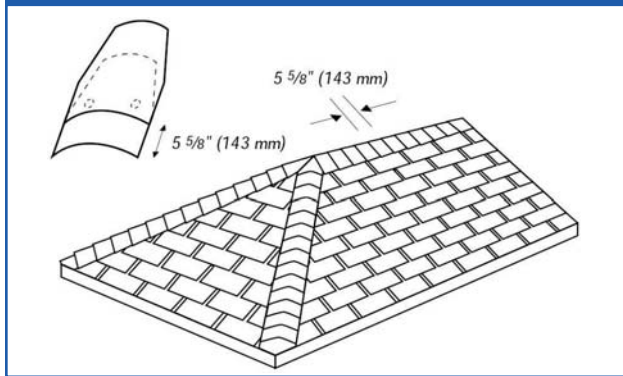


### Apply ridge caps as follows :

1] Bend the cap down the center so as to have equal exposure of the granules on each side of the ridge. In cold weather, warm the cap before bending.

2] Begin at bottom of a hip or at end of ridge opposite to the prevailing wind and apply caps, overlapping to give a 14.3 cm (5 5/8") exposure (see **Figure 24**).

Figure 24



Nail cap with one nail on each side 15,2 cm (6") from the exposed end and 2,5 cm (1") from each side. The same method applies for the gip and ridges.

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# APPLICATION INSTRUCTIONS

## ASPHALT SHINGLES



### SECTION 5

#### LAMINATED SHINGLES

- 5.1 Method 1 - Eclipse GL , Everest , Mystique
- 5.2 Method 2 - Harmony

#### 5.1 - LAMINATED SHINGLES - Eclipse GL, Everest, Mystique

**\* NOTE :** In order to make the distinction between the application of shingles offered in the East verses those offered in the West :

**EAST :** In the Atlantic, Ontario and Quebec provinces, sealant strips are on the back of the ECLIPSE GL, EVEREST and MYSTIQUE shingles. Nails need to be applied on the nailing line.

**WEST :** In the Prairies as well as in British Colombia, sealant strips are on the top of the ECLIPSE GL, EVEREST and HARMONY shingles. Nails need to be applied between the adhesive dabs.

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**Section 3** - General Instructions.

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See Section 3.2-A
- **Underlayment**  
See Section 3.2-B
- **Low Slope Application**  
See Section 3.3
- **Valley Preparation**  
See Section 3.5
- **Flashing**  
See Section 3.6



# APPLICATION INSTRUCTIONS

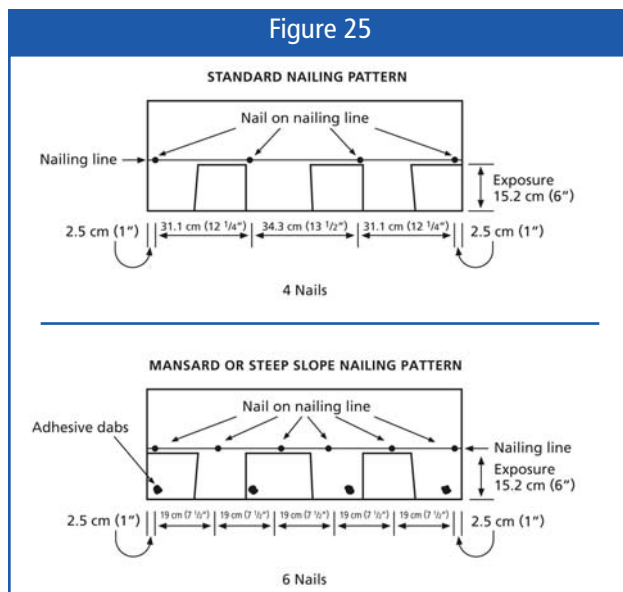
## ASPHALT SHINGLES

### B.1 - Application of Shingles :

#### Nailing :

Improper nailing will render the warranty null and void (voir **Section 3.1-A**). Nail as per **Figure 25**. The head of the nails must be driven flush to the top of the shingle surface. Raised nails can result in shingle distortion and may prevent sealing due to lack of contact with the sealant. Do not use staples to attach shingles. A minimum of four nails per shingle is required for all slopes. On steep sloped or mansard 15/12 and up, a minimum of six nails is required (see **Section 3.1-D**).

Figure 25



**ECLIPSE GL and EVEREST shingles offered in the West**, must be nailed between the adhesive dabs to allow penetration through the double-ply area just above the tops of the laminated tabs. **On the other hand, ECLIPSE GL, EVEREST and MYSTIQUE offered in the East**, must be nailed on the nailing line.

Place one nail 2.5 cm (1") back from each end and one 33 cm (13") back from each end of the shingle for a total of four nails, or place one nail 2.5 cm (1") back from each end and equally space four more nails every 19 cm (7 1/2"), for a total of six nails (see **Figure 5 à la Section 3**).

#### Starter Course :

Prepare the deck with eaves protection, underlayment, drip edges and flashings as recommended.

1] Use BP Starter Strip Shingles or cut away and discard the lower tab portion of self-sealing type shingles ;

2] Cut 15.2 cm (6") off the left end of the first shingle and install with the factory applied adhesive adjacent to the eaves. The starter course should overhang both the eave and rake edges 6 mm (1/4") ;

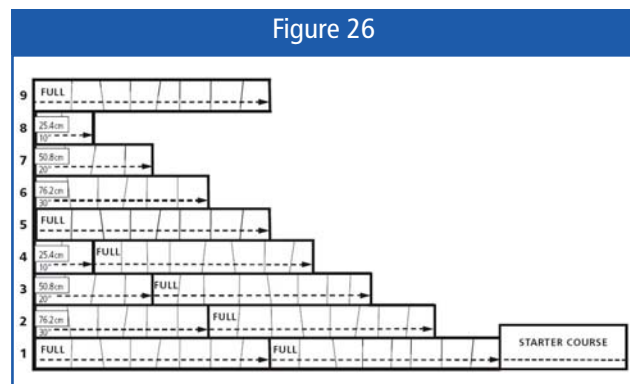
3] Continue across the roof with full length starter strip or trimmed shingles. Nail with four nails equally spaced across the shingle, to 7.6 cm (3") up from the eave.

Asphalt Plastic Cement may be used underneath the first course of the starter strip and along the rake edge as needed. Plastic cement should be used sparingly, as excessive amounts may cause blistering.

#### Application :

Start the first course with a full shingle. For the second course, cut 25.4 cm (10") from left end of shingle, and apply the long section over the headlap of the first course shingle, exposing it 15.2 cm (6"). For the third course, cut 50.8 cm (20") from the left end of the shingle and apply the long section over the headlap of the second course. Begin the fourth course with a partial shingle measuring 25.4 cm (10") establishing the overall diagonal method. Start the fifth course with a full shingle, repeating the process beginning with a full shingle and starting each succeeding course as described above. Continue to make your way across the roof, ensuring a 15.2 cm (6") exposure throughout the roof (see **Figure 26**).

Figure 26



**NOTE :** do not align joints of shingle courses when working in cut pieces . Joints should be no closer than 25.4 cm (10") vertically from one another .

# SECTION 5



## Shingle application in the valley :

At the end of the shingle course, cut the last shingle flush with the chalk line. Cut off the upper corner of the shingle to prevent water infiltration between the courses (see **Section 3.5**). Cement the shingles to the valley flashing with Asphalt Plastic Cement, and nail as usual.

## Hip and Ridge Treatment :

Use appropriate BP three-tab shingle of same colour (see **Table 3**). Ensure shingles are sufficiently warm and flexible to prevent cracking in cold climates.

Table 3		
Laminated Shingles	HR East	HR West
Eclipse GL	Yukon SB ; Meridian 3D	
Everest		
Harmony	n/a	Yukon SB ; Meridian 3D
Mystique	Dakota	n/a





# APPLICATION INSTRUCTIONS

## ASPHALT SHINGLES

### **5.2 - LAMINATED SHINGLES - Harmony**

Before proceeding with the installation, please refer to the following sections in this Application Instructions :

**Section 1** - Getting Ready For The Job ;

**Section 2** - Preparation, Protection of vulnerable area & Ventilation ;

**Section 3** - General Instructions.

**NOTE :** Compliance with all local safety regulations is the responsibility of the applicator. Compliance with current building code requirements is the responsibility of the applicator and the homeowner. Self-sealing hip and ridge shingles contain self-sealing adhesive strips that must be exposed to sufficient surface temperatures before full thermal sealing can occur. Shingles installed in the fall or winter may not seal until they are exposed to such periods of sufficient surface temperatures (see Section 3.1-F). In addition, contamination of the self-sealing adhesive by dust or foreign matter may prevent the sealing strip from achieving full thermal seal. Prior to sealing, shingles are more vulnerable to being blown-off or incurring wind damage.

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#### **A.1 - GENERAL DIRECTIONS :**

- **Roof Deck**  
See Section 2.2
- **Cement**  
See Section 3.1-B
- **Installing Shingles over an Existing Roof**  
See Section 3.1-G
- **Eave Protection**  
See Section 3.2-A
- **Underlayment**  
See Section 3.2-B
- **Low Slope Application**  
See Section 3.3
- **Valley Preparation**  
See Section 3.5
- **Flashing**  
See Section 3.6



# SECTION 5

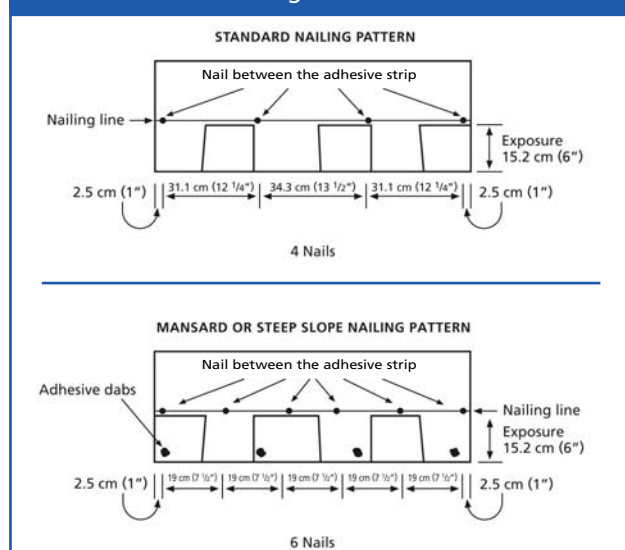


## B.2 - Application of Shingles :

### Nailing :

Improper nailing will render the warranty null and void (see **Section 3.1-A**). Nail as per **Figure 27**. The head of the nails must be driven flush to the top of the shingle surface. Raised nails can result in shingle distortion and may prevent sealing due to lack of contact with the sealant. Do not use staples to attach shingles. A minimum of four nails per shingle is required for all slopes. On steep sloped or mansard roofs 15/12 and up, a minimum of six nails is required (see **Section 3.1-D**). Shingles must be nailed between the adhesive to allow penetration through the double-ply area just above the tops of the laminated tabs. Place one nail 2.5 cm (1") back from each end and one 31.12 cm (12 1/4") back from each end of the shingle for a total of four nails, or place one nail 2.5 cm (1") back from each end and equally space four more nails every 19 cm (7 1/2") for a

Figure 27



total of six nails (see **Figure 5** à la **Section 3**).

It is not necessary to remove the cellophane tape from the back of the shingles.

### Starter Course :

Prepare the deck with eaves protection, underlayment, drip edges and flashings as recommended.

1] Use BP Starter Strip Shingles or cut away and discard the lower tab portion of self-sealing type shingles ;

2] Cut 15,2 cm (6") off the left end of the first shingle and install with the factory applied adhesive adjacent to the eaves. The starter course should overhang both the eave and rake edges 6 mm (1/4") ;

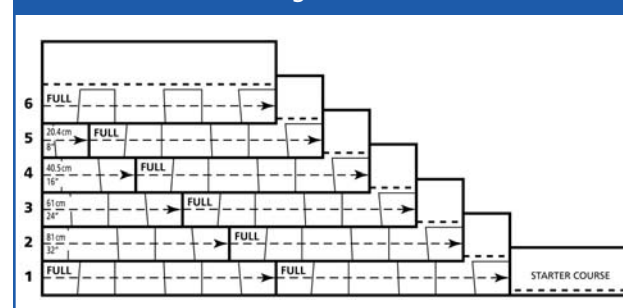
3] Continue across the roof with full length starter strip or trimmed shingles. Nail with four nails equally spaced across the shingle, 7.5 cm (3") up from the eave.

Asphalt plastic cement may be used underneath the first course of the starter strip and along the rake edge as needed. Asphalt plastic cement should be used sparingly, as excessive amounts may cause blistering.

### Application :

Start the first course with a full shingle. For the second course, cut 20.4 cm (8") from left end of shingle, and apply the long section over the headlap of the first course shingle, exposing it 15.2 cm (6"). For the third course, cut 40.5 cm (16") from the left end of the shingle and apply the long section over the headlap of the second course. Courses four and five are begun with a partial shingle 20.4 cm (8") shorter progressively, establishing the overall diagonal method. Start the sixth course with a full shingle, repeating the process beginning with a full shingle and starting each succeeding course as described above. Continue to make your way across the roof, ensuring a 15.2 cm (6") exposure throughout. When you make your final cut at the roof's edge, use the pieces that are 20.4 cm (8") or longer. These can be worked in anywhere on the roof without creating zippers or color variations (see **Figure 28**).

Figure 28



**NOTE :** Do not align joints of shingle courses when working in cut pieces. Joints should be no closer than 10 cm (4") vertically from one another.



## SECTION 5

### **Shingle application in the valley :**

At the end of the shingle course, cut the last shingle flush with the chalk line. Cut off the upper corner of the shingle to prevent water infiltration between the courses (voir **Section 3.5**). Cement the shingles to the valley flashing with BP Asphalt Plastic Cement, and nail as usual.

### **Hip and Ridge Treatment :**

Use appropriate 3-tab shingles of equivalent colour (see **Table 3**) in **Section 5.1**. Ensure shingles are sufficiently warm and flexible to prevent cracking in cold climates.

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# APPLICATION INSTRUCTIONS

## ASPHALT SHINGLES



### SECTION 6

#### MERIDIAN (HR) 3D

##### 6.1 Hip & Ridge E-Z fold

### 6.1 - HIP & RIDGE - Meridian (HR) 3D

Before proceeding with the installation, please refer to the following section in this Application Instructions :

#### Section 1 - Getting Ready For The Job

**NOTE :** Compliance with all local safety regulations is the responsibility of the applicator. Compliance with current building code requirements is the responsibility of the applicator and the homeowner. Self-sealing hip and ridge shingles contain self-sealing adhesive strips that must be exposed to sufficient surface temperatures before full thermal sealing can occur. Shingles installed in the fall or winter may not seal until they are exposed to such periods of sufficient surface temperatures (see Section 3.1-F). In addition, contamination of the self-sealing adhesive by dust or foreign matter may prevent the sealing strip from achieving full thermal seal. Prior to sealing, shingles are more vulnerable to being blown-off or incurring wind damage.

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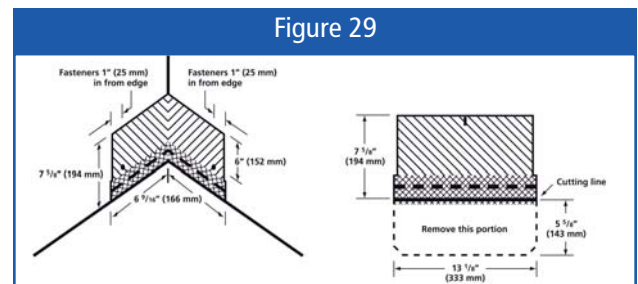
#### A - GENERAL DIRECTIONS :

- **Cement**  
See Section 3.1-B
- **Installing Shingles Over an Existing Roof**  
See Section 3.1-G

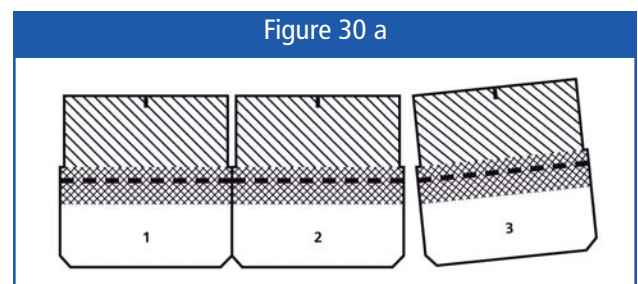
#### B - Application of Shingles :

##### Nailing :

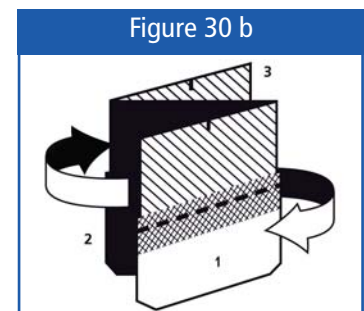
Position nails 15,2cm (6") from the top of the shingle and 2.5cm (1") from each side of the shingle (see Figure 29).



Meridian 3D Hip and Ridge shingles are packaged as pre-scored shingles that separate in three slabs without having to use a knife (see Figure 30 a). Meridian 3D can



be installed as a single layer hip and ridge or the tabs can be superimposed to form a double layer Hip and Ridge. To maximize the dimensional accent of Meridian 3D, the shingle can be folded on itself to form a triple layer hip and ridge shingle (see Figure 30 b).





# APPLICATION INSTRUCTIONS

## ASPHALT SHINGLES

Hip application starts at the eave end of the hip and works up to the ridge. Application of the ridge on a hipped roof starts at each end and meets in the middle. Application of ridge on a structure with no hips starts at the end opposite to prevailing winds and continues to the other end.

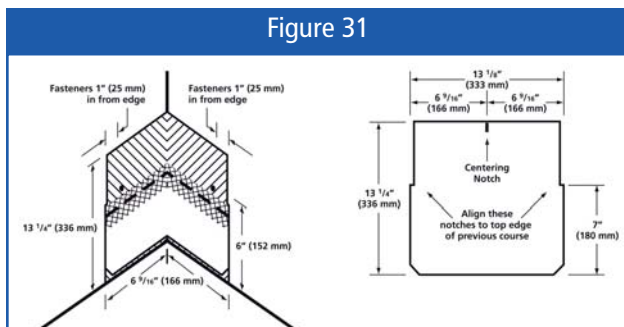
### 1 - One-Layer Installation :

#### Starter Course :

Cut 14.3 cm (5 5/8") off the exposure portion of one piece of the hip and ridge shingle. Align butt edge to the bottom of the hip or to either end of the ridge. Fasten with two (2) fasteners (see **Figure 29**).

#### Application :

For the first row, starting with one complete piece of a hip and ridge shingle, cover the starter course shingle by lying flush to the bottom and sides of the starter course (see **Figure 31**).



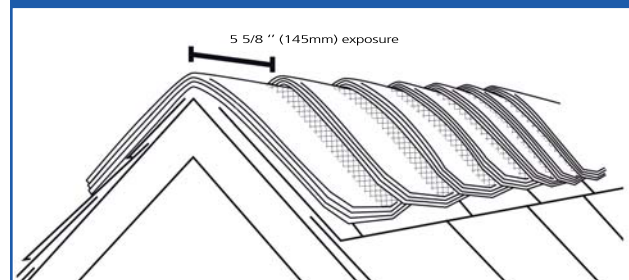
All subsequent rows are formed by bending the hip and ridge shingle along the centerline leaving a 14.3 cm (5 5/8") exposure (see **Figure 32**).

### 2 - Two-Layer Installation :

#### Starter Course :

Cut 14.3 cm (5 5/8") off the exposure portion of two (2) pieces of the hip and ridge shingle. Apply this double layer shingle (one on top of the other), aligning butt edge to the bottom of the hip or to either end of the ridge. Fasten with two (2) fasteners (see **Figure 29**).

Figure 32



#### Application :

For the first row, starting with two (2) complete pieces of hip and ridge shingles placed one on top of each other, cover the starter course shingles. Fasten as per **Figure 31**.

For all subsequent rows, apply two complete pieces of hip and ridge shingles placed one on top of each other over the previous row while assuring a 14.3 cm (5 5/8") exposure (see **Figure 32**).

### 3 - E-Z fold Three-Layer Installation :

For three-layer applications, instead of detaching individual pieces from a full shingle, simply fold the shingle on to itself as shown in (see **Figure 30 b**). Always assure shingles are stacked straight in multi-layer applications.

#### Starter Course :

Cut 14.3 cm (5 5/8") off the exposure portion of three (3) pieces of the hip and ridge shingle. Apply the three layer shingle (one on top of the other), aligning butt edge to the bottom of the hip or to either end of the ridge. Fasten with two (2) fasteners (see **Figure 29**).

#### Application :

For the first row, starting with three (3) complete pieces of hip and ridge shingles placed one on top of each other, cover the starter course shingles. Fasten as per **Figure 31**.

# SECTION 6



For every subsequent row, apply three complete pieces of hip and ridge shingles placed one on top of each other over the previous row while assuring a 14.3 cm (5 5/8") exposure (see **Figure 32**).

**IMPORTANT :** When installing Meridian 3D Hip & Ridge shingles over ridge vents, follow ridge vent manufacturer's instructions carefully. Do not allow primary shingles and/or roofing underlayment to block air movement through the ridge line.

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