



## Armour Starter English Application Instructions

**IMPORTANT MESSAGE • PLEASE READ! NOTE:** PRODUCTS MUST BE APPLIED PROPERLY. THEY ARE DESIGNED FOR USE AS STARTER STRIP SHINGLES ONLY, AND SHOULD NOT BE USED FOR ANY OTHER APPLICATION. WE ASSUME NO RESPONSIBILITY FOR LEAKS OR DEFECTS RESULTING FROM POOR APPLICATION OR FAILURE TO PROPERLY PREPARE THE SURFACE TO BE ROOFED OVER, OR FAILURE TO PROVIDE PROPER VENTILATION IN ACCORDANCE WITH MINIMUM PROPERTY STANDARDS REQUIREMENTS. REVIEW ALL APPLICABLE BUILDING CODES, MINIMUM PROPERTY STANDARDS, AND REQUIREMENTS PRIOR TO APPLYING THESE SHINGLES USING THE APPLICATION INSTRUCTIONS FOUND ON THIS WRAPPER. USE CAUTION WHEN STACKING BUNDLES ON SLOPED ROOFS.

**ROOF SLOPE:** Never apply asphalt shingles to roof slopes less than 2:12. For slopes 2:12 to 4:12 (LOW SLOPE), see special underlayment requirements outlined below.

**STEP 1: PREPARE THE ROOF DECK:** Deck must be smooth, firm, clean, dry and securely nailed. Wood panel decking is to be exterior grade, conforming to building code requirements. Panels are to be 3/8" min. thick plywood, or 7/16" min. thick non-veneer. The installation of asphalt shingles on dimensional lumber (including shiplap/board decks) is not recommended as it may potentially cause buckling problems, and may not be covered by the applicable Asphalt Shingle Limited Warranty.

**STEP 2: APPLY DRIP EDGE ALONG EAVES:** Apply metal drip edges directly to the deck along the eaves, spacing nails approximately 12" apart.

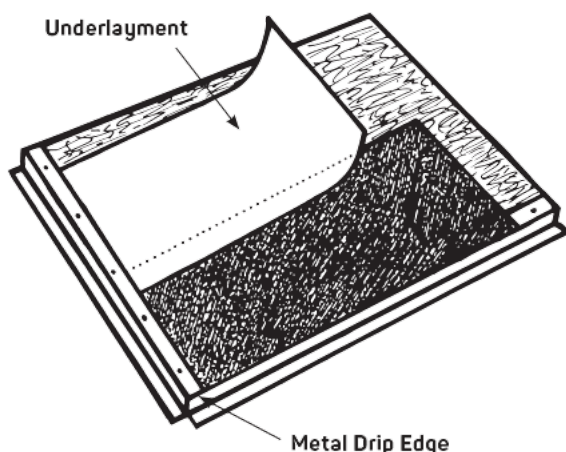
**STEP 3: EAVE PROTECTION:** Apply eave protection, such as IKO StormShield® Ice and Water Protector, as per building code requirements and manufacturer's instructions, overhanging eaves by 1/4" to 3/4" and extending up the roof at least 24" beyond the interior wall line. NOTE: IKO recommends the use of eaves protection in all situations, however, if no ice and water protector is required by your local code or standard, then alternately apply first course of underlayment overhanging the eaves by 1/4" to 3/4".

**STEP 4: UNDERLAYMENT:** Apply underlayment, either asphalt saturated felt or synthetic underlayment, such as IKO's Stormtite™, in horizontal courses up the roof with 2" side laps and 4" end laps. Trim the sheet to fit the final course at the peak. One layer of asphalt saturated felt (or equivalent) is required over the entire deck to qualify for an ASTM E108 Class A fire rating or which may be required per the local building code.

**LOW SLOPE:** For roof slopes less than 4:12 down to 2:12 apply underlayment in successive courses by overlapping the preceding sheet by 19" with 4" end laps. Alternately, apply a single layer of Ice and Water Protector over the entire deck per manufacturer's instructions.

**STEP 5: APPLY DRIP EDGE AT THE RAKES:** Apply metal drip edges on top of any underlay along rake edges, spacing nails approximately 12" apart.

### STEPS 1-5



**STEP 6: INSTALL FLASHING:** Corrosion-resistant flashing must be used to help prevent leaks where a roof meets a wall, another roof, a chimney or other objects that penetrate a roof. Flashing shall conform to the requirements of applicable building code and good roofing practice.

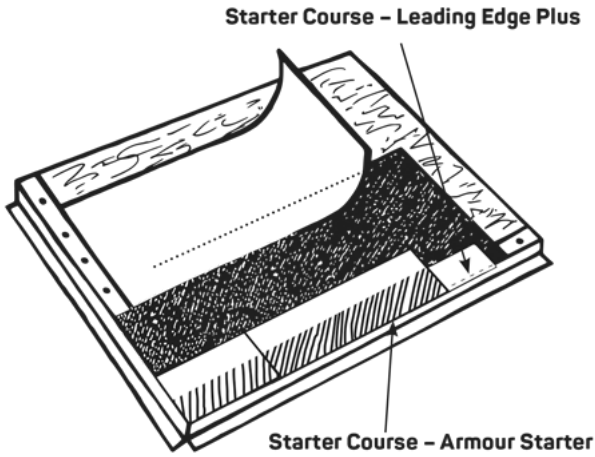
**STEP 7: INSTALL OPEN METAL VALLEYS:** Metal valleys are recommended. (Closed valley applications are acceptable but not recommended. Please see Limited Warranty for details.) Complete valley flashing before shingles are applied. Center a 36" wide strip of ice and water protector in the valley and then fasten at the edges with only enough nails to hold in place. Center a minimum 24" wide, minimum 28 gauge pre-finished/galvanized metal valley liner in the valley, and fasten the edges with only enough nails to hold in place. Snap two chalk lines the full length of the valley, 6" apart at the top and increasing in width 1/8" per foot towards the bottom. When the shingles are being applied, lay them over the valley flashing, trim the ends to the chalk line, and cut a 2" triangle off the corner to direct water into the valley. Embed the valley end of each shingle into a 3" band of asphalt plastic cement. Do not place a nail in the shingle closer than 2" from the chalk line.

**STARTER COURSES:** The starter courses require both Leading Edge Plus and Armour Starter shingles. Use galvanized (zinc coated) roofing nails, 11 or 12 gauge, with at least 3/8" diameter heads, long enough to penetrate through plywood or 3/4" into boards.

**STEP 8: STARTER COURSE – LEADING EDGE PLUS:** Cut approximately 4" of a Leading Edge Plus shingle and apply to the lower left corner of the roof overhanging the eave and rake by 1/4" to 3/4". Continue with full length Leading Edge Plus across the eave edge overhanging the eave by 1/4" to 3/4". Fasten the Leading Edge Plus with 4 nails 1" above the sealant strip, 1" in from each edge and midway between those points.

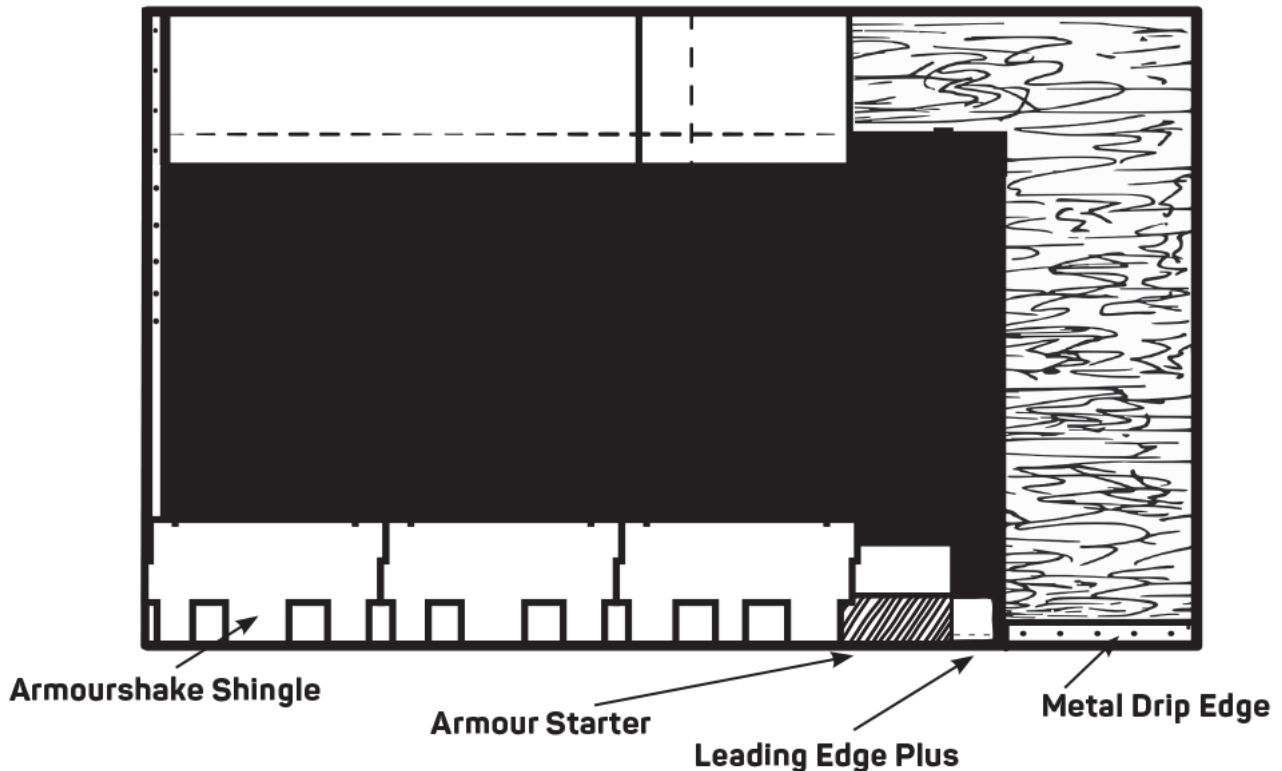
**STEP 9: STARTER COURSE – ARMOUR STARTER:** The Armour Starter must be the matching color of the Armourshake shingles. Cut approximately 20" from an Armour Starter shingle. At lower left edge, apply the cut Armour Starter shingle flush to the rake and eave edges of the Leading Edge Plus with the matching color portion on the bottom. Continue with full length Armour Starter across the eave applied flush with the eave edge of the Leading Edge Plus shingles. Fasten the Armour Starter to the roof deck with four nails located just above the area of colored granules, approximately 1" in from each end, and midway between those points.

## STEP 8-9



**STEP 10: INSTALL THE ARMOURSHAKE SHINGLES:** Apply the IKO Armourshake roof shingles as per the instructions printed on each product's package. Make certain the first course of field shingle lies flush with the edges of the fastened IKO Armour Starter. The sealant on the back of the IKO Armourshake shingles will adhere to the Armour Starter shingles. For enhanced wind resistance at the eave edge, the Armour Starter can be manually sealed to the deck with four approximately 1" diameter spots of asphalt plastic cement spaced evenly along the lower edge of the shingle.

## STEP 10



**STEP 11: INSTALL HIPS AND RIDGES:** IKO recommends its pre-cut hip and ridge products, or pre-formed high profile IKO UltraHP. For IKO pre-cut hip and ridge products bend each piece over the hip or ridge, and nail per instructions on the wrapper. The final shingle should be set in roofing cement and the exposed nail heads of this shingle should be covered with roofing cement. For IKO UltraHP, follow the instructions on the box. Prior to application in cold weather, store hip and ridge shingles in a heated area to allow for easier bending.

**FASTENERS:** Nails must be 11 or 12-gauge roofing nails, corrosion-resistant, with at least 3/8" heads, and at least 1" long. For decks 3/4" thick or thicker, nails must go at least 3/4" into the deck. On thinner decks, nails must go at least 1/8" through the deck.

## IMPORTANT! – PROPER NAILING

Standard Application Requires 4 Nails/Fasteners

