INTRODUCING

Product Literature and Promotional Support Materials

DLYMER MODIFIED HEAVY WEIGHT SHINGLE

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Innovation for the future...

Since 1956, Malarkey Roofing Products[®] has been meeting the changing demands of the roofing industry by developing new products and manufacturing methods. Today, we continue our long tradition of innovation with the Windsor[™] Elegant Heavyweight Shingle.



Featuring

SCOTCHGAR

WWW.MALARKEYROOFING.COM

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For more information on Malarkey shingles visit our website at:

WWW.MALARKEYROOFING.COM

INTRODUCING

Innovation for the future...

ELEGANT POLYMER MODIFIED HEAVYWEIGHT

Innovating with Scotchgard Algae Resistant Shingle Protector from 3M The best solution to keep your roof looking cleaner for longer - includes a 20-year warranty.



Innovating with Class 4 Impact Resistance UL 2218 Class 4 Impact Resistance rating - the highest rating possible in the roofing industry.



Innovating with SBS Polymer Modified Asphalt Increases the flexibility, weatherability and granule adhesion of the shingles.



Innovating with Easier Roofing Contractor Application The Windsor is engineered for the roofing contractor. The larger tabs and exposure cover two courses vs. similar products which cover in three courses.



Innovating with All Weather Flexibility Polymer modified asphalt ensures shingles are easier to install in temperatures down to $0^{\circ}F(-18^{\circ}C) - 40$ degrees lower than standard asphalt.







Available in 5 vibrant

Scan the QR code to watch the Windsor installation video Featuring

ТΜ

SCOTCHGARD



Sample Boards Available



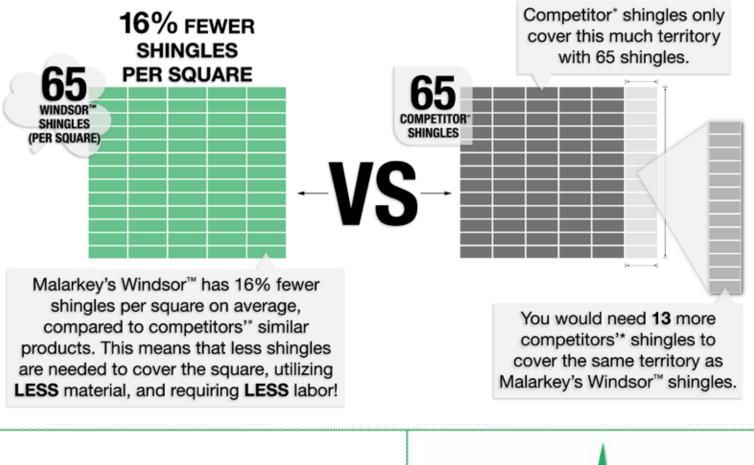
WINDSOR[™] SHINGLE COLORS



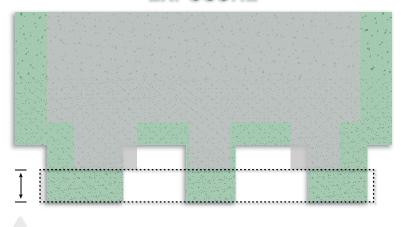


MALARKEY'S WINDSOR[™] EXPOSURE COMPARED TO THE COMPETITION'S EXPOSURE

SHINGLE PRODUCT	EXPOSURE	SHINGLES PER SQUARE	NAILS SAVED WITH WINDSOR	
Malarkey's Windsor™ VS 4" Exposure	30% Greater 5¾" √S 4"	28% Fewer 65 pcs VS 90 pcs	125 per sq.	
Malarkey's Windsor™ VS 4½" Exposure	22% Greater 5¾" √S 41⁄2"	19% Fewer 65 pcs √S 80 pcs	75 per sq.	
Malarkey's Windsor™ VS 5" Exposure	13% Greater 5¾" VS 5"	10% Fewer 65 pcs VS 72 pcs	35 per sq.	
Malarkey's Windsor™ VS 5½" Exposure	4% Greater 5¾" √S 5½"	7% Fewer 65 pcs VS 70 pcs	25 per sq.	
How does the Windsor [™] Compare?				
Average of Windsor™ compared to competitor data:	17% Greater⁺ <i>exposure</i>	16% Fewer [‡] shingles per square	Save 65 nails per sq. [§]	



17% GREATER **EXPOSURE**



Malarkey's Windsor[™] shingle has a 17% greater exposure on average than comparable competitors'* products.



saves an average of 65 nails per square during installation.

^{*&}quot;Competitor" refers to an average of some comparable competitor products.

^{*}The percentage of exposure is determined by dividing the competitor shingle exposure by Malarkey's shingle exposure, and then subtracting the sum from 100. We then calculated the average of the competitor shingles.

[‡]The percentage of shingles per square is determined by dividing the number of Malarkey shingles per square by the number of competitor shingles per square, and then subtracting the sum from 100. We then calculated the average of the competitor shingles.

^{\$}The number of nails saved was calculated by subtracting the number of nails used in a Malarkey Windsor 5-nail pattern per square from the average number of nails used in four competitor 5-nail patterns.













LIMITED WIND WARRANTY

ENHANCED WIND WARRANTY



Scotchgard[™] Algae Resistant Shingle Protector from 3M

- 10% patented copper-coated, extended release granules
- · Independent third party lab tested
- · 3M granules are more consistent in size and color, reducing batch lot and shading issues.

Class 4 Extreme Weather Protection

· UL 2218 Class 4 impact rating – the highest rating possible in the roofing industry

SBS Polymer Modified Asphalt

- · Superior granule retention
- · Enhanced asphalt for superior performance
- · Increased and improved sealability around fasteners
- · Increased and improved performance for thermal shock throughout the seasons

All Weather Flexibility

- Flexible in temperatures down to 0°F (-18°C) 40 degrees lower than standard asphalt
- · Conforms to a variety of roof structures, withstands extreme weather cycles, and can be installed in a wider range of climates.

SEBS Rain Seal

- SEBS adhesive tolerates 800% elongation (keeps it flexible at 32°F/0°C)
- · Holds shingles in place during high winds and protects against wind-driven rain entering beneath shingles.

Limited Wind Warrantv

· 110 mph (177 kph) wind warranty

Enhanced Wind Warranty

 Eligible for a 140 mph (225 kph) Enhanced Wind Warranty when Malarkey's Smart Start[™] shingle is installed, shingles are nine-nailed, and one or more of Malarkey's supporting products – Arctic Seal®,

Right Start[™] UDL, SecureStart[™], EZ-Ridge[™] (8", 10") or Hip & Ridge Strips (10", 12") – are used.

Warranty

- Limited Lifetime Shingle Warranty
- Your Choice Warranty Program available

Test Compliance

- · ASTM D7158 Class H
- · Class A Fire Resistance
- · ASTM D3161 Class F
- UL 2218 Class 4

δFor complete Limited Lifetime warranty details, reference Malarkey's Limited Lifetime Shingle Warranty.

ASTM D3462

CSA A123.5

ASTM D3018 Type I

*Scotchgard Algae Resistant Shingle Protector requires algae resistant EZ-RidgeTM (8", 10") or Hip & Ridge (10", 12"), in conjunction with algae resistant shingles, to receive the full 20-year Scotchgard Algae Resistant Shingle Protector warranty. The Alaskan® featuring ScotchgardTM can be substituted as hip and ridge shingles, in conjunction with algae resistant shingles, to receive the full 20-year Scotchgard warranty. Scotchgard and the Scotchgard logo, including the plaid design and 3M logo, are all trademarks of 3M.

** Some contractors adapt roofing shingles to use as hip and ridge shingles. Use of The Alaskan® as a hip and ridge shingle will apply towards the Enhanced Wind Warranty. Dura-SealTM shingles used for hip and ridge will not qualify toward an Enhanced Wind Warranty.

Colors

- Antique Brown
 - Midnight Black
- Natural Wood
- Storm Grey
- Weathered Wood

Directions for Applying Malarkey Windsor[™] Shingles

GENERAL INSTRUCTIONS

Install Windsor[™] in accordance with local building codes and amendments. To qualify for warranty protection and obtain stated coverage, the instructions on the package must be followed. Shingles must be applied according to printed instructions. We assume no responsibility for leaks or when there has been improper application, failure to properly prepare the surface, or failure to provide proper ventilation according to FHA minimum property standard requirements and adopted building codes.

For current warranty information, please visit www.malarkeyroofing.com/warranty-center.

Standard exposure is 534"(146 mm) to the weather. Offset between courses is 63%" (162 mm). Minimum offset for shingle installation is 51/2" (140 mm).

These step-by-step application instructions apply to standard slopes/inclines not less than 4" (102 mm) per 12" (305 mm) or more than 21" (533 mm) per 12" (305 mm). For low slopes [2" (51 mm) to less than 4" (102 mm) per 12" (305 mm)] and steep slopes [more than 21" (533 mm) per 12" (305 mm)], modify the installation as described below. Do not apply shingles on roofs having a slope less than 2" (51 mm) per 12" (305 mm).

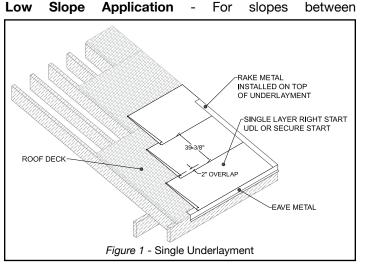
Ventilation - To prevent harmful condensation or heat buildup, air must circulate freely under the roof deck. Install roof vents at ridges and eaves. Building codes require one square foot of free ventilation to each 150 ft² (1 m²/150 m²) of attic area or one square foot/300 ft² (1 m²/300 m²) if 50% ventilation is provided near the ridge. All roof structures must have thorough ventilation to prevent entrapment of moisture-laden air behind roof sheathing.

Ventilation provisions must meet or exceed current FHA or HUD requirements and adopted building codes.

Roof Deck - The roof deck must be at least $\frac{3}{6}$ " (9.5 mm) thick plywood sheathing or $\frac{7}{16}$ " (11 mm) thick non-veneer sheathing (OSB), or nominal 1" (25 mm) thick wood boards and meet local building code requirements. Malarkey strongly recommends installing sheathing over wood board decks. Problems with the performance of your roofing system, such as leaks and buckling, increase if installed directly over wood board decks. Failure to use properly conditioned deck materials can result in deck movement which can damage the roof covering. Install in accordance with code and industry standards with the most stringent prevailing.

Underlayment - Apply a layer of one of Malarkey's underlayments or a code-compliant underlayment on sheathing. Lap a minimum of 2" (51 mm) between courses vertically, lap 6" (152 mm) on ends and nail sufficiently to

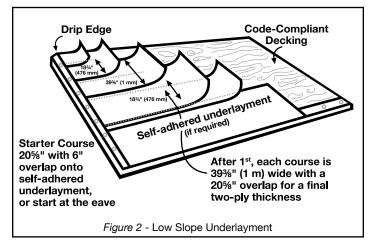
hold in place and work safely until shingles are applied (or per adopted building code). Application into any horizontalto-vertical transition, underlayment must carry a minimum 3" (76 mm) up onto vertical. *Please refer to Figure 1*.



2" (51 mm) to 4" (102 mm) per 12" (305 mm), begin by nailing a 20%" (524 mm) wide strip of one of Malarkey's underlayments, or a code-compliant underlayment evenly along the eaves, or lap 6" (152 mm) onto self-adhered underlayment. Succeeding courses will all be 39%" (1 m) wide underlayment and positioned to overlap the preceding course 20%" (524 mm) (provides double coverage), (Figure 2), by using only enough fasteners to hold in place and work safely until shingles are applied (or per adopted building code). For ice dam protection, see *Ice Dam Protection* section.

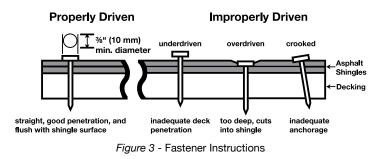
Drip Edges - Metal drip edges are installed along rake and eave edges on all decks, especially plywood/OSB decks. Drip edges should be made of corrosion-resistant materials that extend 2" (51 mm) minimum back from roof edges and bend downward over them. Drip edges are installed under the underlayment at the eaves and on top of the underlayment at the rake edges. Secure eave and rake metal with roofing nails, centered on the top of flange of the metal at 8" (203 mm) to 10" (254 mm) on center (or as required by building code).

Ice Dam Protection - If there is a possibility of ice forming at the eaves causing a backup of water or if required by building codes, install self-adhered underlayment (e.g. Malarkey's Arctic Seal[®] 401 or code-complying ASTM D1970 underlayment) directly to dry, clean roof deck on all eaves and rake edges of the roof. Extend into the inside, warm interior wall of the roof a minimum of 24" (610 mm), or according to building code requirements. *Please refer to Figure 2.*

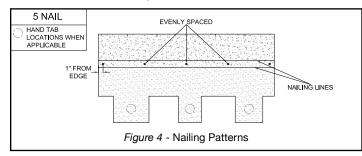


Fastener Instructions - Nails must be galvanized 12-gauge with $\frac{3}{6}$ " (10 mm) head or an equivalent corrosion-resistant roofing nail, and must be sufficient in length to penetrate through the roof deck or into the deck a minimum of $\frac{3}{4}$ " (19 mm), whichever is less. *Please refer to Figure 3.*

Staples are not an approved fastening method.



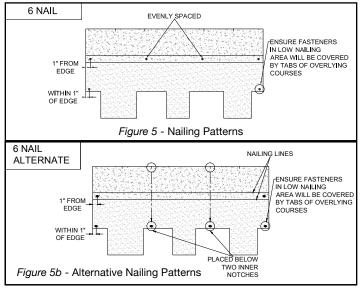
Nailing Pattern - Use five fasteners for each shingle, equally spaced across shingle in-between the nailing lines, making sure one nail is approximately 1" (25 mm) from each edge, and the remainder equally spaced in-between the nail lines. *Please refer to Figure 4.*



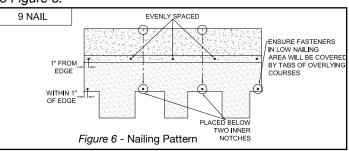
In regions that require 6 nails per shingle, two methods may be used.

Method 1: End nails should be placed approximately $\frac{3}{4}$ " (19 mm) above the tabs and no more than 1" (25 mm) in from shingle ends, making sure they will be covered by the tab of the course above them and not visible after installation. Remaining 4 fasteners are applied in-between the nailing lines, placing end nails approximately 1" (25 mm) from each edge and the remaining 2 nails equally spaced. When fastening, butt shingles loosely to prevent buckling. *Please refer to Figure 5.*

Method 2: Four nails should be fastened in the low nail area approximately $\frac{3}{4}$ " (19 mm) above the tabs, making sure fasteners go through all layers of shingle and through the deck or into the deck a minimum of $\frac{3}{4}$ " (19 mm), whichever is less. Make sure to nail such that all low nail area fasteners are covered by tabs of the overlying course. The two interior notches at the top of the shingle will aid in alignment of the two interior low nailing area fasteners. Two end nails should be placed in-between the nailing lines, approximately 1" in from each edge. *Please refer to Figure 5b.*



High Wind & Steep Slope Nailing of Shingles - Roof decks with slopes greater than 21" (533 mm) per 12" (305 mm) require installation with 9 fasteners per shingle, with 5 nails in the high nail area, and 4 nails in the low nail area approximately 3/4" (19 mm) above the tabs, making sure fasteners go through all layers of shingle and through the deck or into the deck a minimum of 3/4" (19 mm), whichever is less. Make sure to nail such that all low nail area fasteners are covered by tabs of the overlying course. The two interior notches at the top of the shingle will aid in alignment of the two interior low nailing area fasteners. The 5 fasteners in the high nail area must be placed in-between the nailing lines with end fasteners approximately 1" (25 mm) in from each edge of the shingle. The remaining fasteners should be evenly spaced on the same line as the end fasteners. Please refer to Figure 6.



Hand Tabbing - Roof decks with slopes greater than 21" (533 mm) per 12" (305 mm) require one quarter-sized dab of tab adhesive (ASTM D4586) centered under each shingle tab. The shingle must be pressed firmly into the cement. *Please refer to Figure 4.*

Note: Avoid excessive use of adhesive under shingles as it may cause blistering.

Wind Resistance - Malarkey shingles have a thermal sealant that bonds the shingles together after application when exposed to the sun and warm temperatures. Shingles installed in fall and winter may not seal until the following spring. During that time, further contamination of the thermal sealant from high winds or blowing dust may prevent the shingles from sealing on their own. Failure to seal under these adverse conditions is not a manufacturing defect.

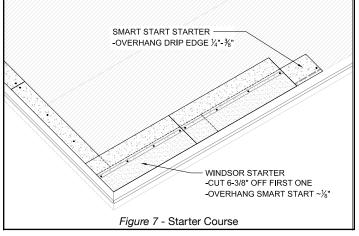
To ensure immediate sealing, Malarkey recommends handtabbing shingles.

Hand-tabbed Windsor[™] shingles require one quarter-sized dab of tab adhesive (ASTM D4586), centered under each shingle tab. The shingle must be pressed firmly into the adhesive (excessive use of adhesive may cause blistering). *Please refer to Figure 4.*

Note: The filmstrip on each shingle is to prevent sticking together while in the bundle and not designed to be removed.

APPLICATION - 6%" OFFSET - DIAGONAL PATTERN

Shingles may be installed starting at either the lower lefthand or right-hand side of the roof. *Please refer to Figure 7*.



First Starter Course: Start with an approved starter strip (e.g., Malarkey's Smart Start[™]) or a full 3-tab shingle of same type (regular asphalt or modified) with the tabs cut off and the adhesive at the roof edge. Smart Start[™] is manufactured with a perforation 8" (203 mm) up from the bottom of the shingle. On the starter shingle, the 5¼" (133 mm) piece at the top may be removed and used on rake to reduce water runoff, enhance wind resistance, and provide a straight edge.

Do not trim the initial Smart Start[™] starter strip shingle. The starter course should overhang the drip edge ¼" to %" (6-10 mm). Continue starter course across the roof. Install with four fasteners 1" to 3" (25-76 mm) above the eave, one fastener approximately 1" (25 mm) from each side of the starter, and the remaining two evenly spaced on the same line as the end fasteners.

Windsor[™] Starter Course: Trim the first Windsor[™] Starter 6%". Overlap the Smart Start[™] starter with the Windsor[™] Starter, positioning the Windsor[™] Starter so the full color

blend overhangs the Smart Start[™] starter by approximately 1/8" (3 mm). Install with four fasteners in-between the paint lines, approximately 1" (25 mm) from each side of the starter and the remaining two evenly spaced. Continue with starter across the roof. *Please refer to Figure 7.*

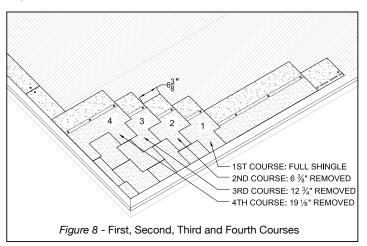
First Course: Start with a full shingle applied onto and flush with the starter course at the eave and rake edge. Secure with fasteners.

Second Course: Cut 6%" (162 mm) from the left end of the shingle and apply the remaining 31%" (810 mm) section over the first course shingle. Bottom edge of the shingle tabs should be applied to the top edge of laminate cutout of underlying shingle so there will be 5%"(146 mm) shingle exposed and flush with the rake edge of the previous course. Secure with fasteners.

Third Course: Cut $12\frac{3}{4}$ " (314 mm) from the rake end of a full shingle and apply the remaining $25\frac{1}{2}$ " (648 mm) section over the second course shingle. Secure with fasteners.

Fourth Course: Cut 19¹/₈" (486 mm) from the rake edge of a full shingle (in half), and apply the remaining 19¹/₈" (486 mm) over the third course of shingles. Secure with fasteners.

Prior to proceeding to fifth course, fill in preceding courses with full shingles, securing with fasteners. *Please refer to Figure 8.*



Courses Five and Above: To continue the installation, repeat the diagonal pattern established in courses one to four. Strike a horizontal chalk line approximately every six courses to ensure horizontal alignment.

Racking of shingles is not recommended.

Note: Shingles may be laid from either left-hand or righthand side. Start at either rake edge and follow layout and cutting instructions as required for proper application. **When fastening, butt ends loosely together to prevent buckling.**

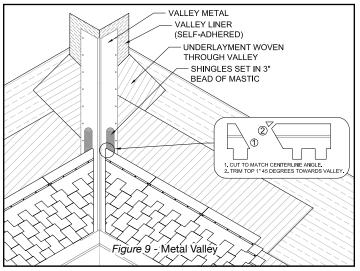
Valleys - Metal valley applications are recommended. Center a valley liner of a code-compliant self-adhered underlayment (e.g., Arctic Seal[®] 401 or code-compliant ASTM D1970 self-adhered underlayment), and apply directly to the roof deck. Lace underlayment into and through the valleys from each side of the valley or tie underlayment onto self-adhered underlayment a minimum of 6" on each side.

Metal Valley - Install 24" (610 mm) wide valley metal and secure with fasteners no more than 1" (25 mm) from the outside edges of the valley metal at a spacing of 10" (254 mm) to 12" (305 mm) on center. Set overlapping ends of the metal valley in a continuous bead of sealant, achieving a lap of 4" (102 mm).

DO NOT FASTEN THE METAL LAP.

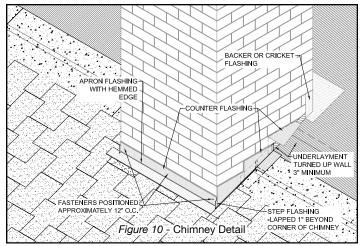
Lay the first course shingles along the eaves of one roof area and over valley metal making sure the top of the shingle reaches or goes beyond the centerline of the valley metal. Complete the installation of the shingles on the roof section. Each shingle entering the valley should start at least 12" (305 mm) from valley centerline and extend so the top corner of the shingle extends to or beyond centerline. After all shingles have been installed in the valley, snap a chalk line that extends out of the center of the metal valley 2" (51 mm) and trim shingle ends to the chalk line. Crop the top of each shingle at 1" (25 mm) and 45°. Embed the cut valley shingles in a 3" (76 mm) continuous bead of mastic.

Continue installing shingles on the adjoining roof as described above. *Please refer to Figure 9.*

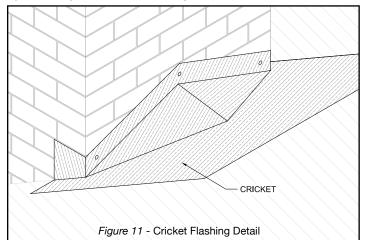


Roof-to-Wall Flashing - Where the roof plane terminates against a side vertical wall or chimney, shingles must be flashed with metal step flashing pieces. Secure to deck with two nails in the upper edge of the horizontal flange. *Please refer to Figure 10.*

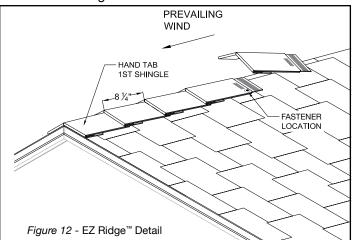
Cap (Counter) & Chimney Flashings – The metal flashing apron for the front of the chimney shall be installed over the last course of shingles below the chimney, and extend up the chimney. The metal flashings of chimneys, skylights, vents, and adjoining walls must be counter-flashed with sheet metal cap flashing. The cap flashing must extend into the masonry mortar joints of the chimney and be mortared in or caulked with urethane sealant to ensure a watertight connection. Metal cap/counter flashing shall turn down



chimney and extend 4" (102 mm) over apron and step flashings at all roof-to-wall details. Metal flashing or other membrane flashing covering cricket or saddle should be cut to cover the entire cricket and extend vertically 4" (102 mm) up chimney. *Please refer to Figure 11.*



Hips and Ridges - Malarkey EZ-Ridge[™] and EZ-Ridge XT[™] High-Profile Hip and Ridge shingles are recommended. Malarkey Hip & Ridge *strip* shingles may also be used. Apply Malarkey hip and ridge shingles beginning at the bottom of the hip or at the ridge opposite the direction of prevailing winds. Use two nails per shingle with one nail on each side, 3/4" (19 mm) behind the cutout and 1/2" (13 mm) up from the edge so the succeeding shingle conceals the nailheads. *Please refer to Figure 12.*



Note: When applying in cold weather or a windy location, it is recommended each ridge shingle be sealed down with a quarter-sized spot of shingle tab adhesive at each lower corner. To avoid damage to hip and ridge shingles during installation in cold weather, Malarkey recommends warming shingles sufficiently. Shingles with the Scotchgard[™] Algae Resistant System from 3M require hip and ridge shingles with the Scotchgard[™] Algae Resistant System from 3M[™] [e.g., Malarkey 8" EZ-Ridge[™] and 10" EZ-Ridge XT[™] High-Profile Hip and Ridge shingles (222 or 224), 10" Malarkey Hip & Ridge Strips (225) or 12" Malarkey Hip & Ridge Strips (227)].

Re-Roofing over Existing Asphalt Shingles – For best performance and appearance, it is recommended to remove old roofing from the deck. In some areas, building codes do not require removal of old roofing if: (1) the existing shingles and framing will support the workers, new roofing and required dead loads; and (2) the old wood deck is sound and able to provide good anchorage for nails. Make the surface as smooth as possible by replacing missing shingles and securely nailing all buckles, raised tabs or curled shingles. Additional ventilation should be added.

Malarkey is not responsible for objectionable appearance of the new surface from any irregularity in the substrate caused by remaining roofing.

Enhanced Wind Warranty - An Enhanced Wind Warranty is available when additional installation requirements are met. See Malarkey Roofing Products' Limited Lifetime Warranty "Enhanced Wind Warranty" section for details.

These instructions are meant to act as a general guide. There are alternative installation methods for the installation of this product. Please contact Malarkey for details.

VENTILATION REQUIREMENTS

Inadequate ventilation of attic areas can cause a buildup of moisture and heat.

These conditions can cause:

- 1. Accelerated roof weathering;
- 2. Deck rot and attic fungus;
- 3. Shingle distortions due to deck movement;
- 4. Blisters.

Install roof vents at ridges and eaves. Building codes require one square foot of free ventilation to each 150 ft² (1 m²/150 m²) of attic area or one square foot /300 ft² (1 m²/300 m²) if 50% ventilation is provided near the ridge.

ATTENTION

Malarkey assumes no responsibility for color variations. The granules embedded in the shingle are subject to color variation of absorption and reflection of light. This may cause apparent variations in color shade, but in no way affects the durability of the shingle. If shingles in any bundle are suspected to be defective, submit a sample representative of the defect along with wrapper and details to dealer.

PREVENT BLOW-OFF

The tab cement manufactured on these shingles requires heat for sealing. From spring to fall the warmth of the sun should seal the tabs to the course below in a matter of days. When applied in winter, the time required for sealing will depend upon the climate and geographical location. In cold weather and in areas of severe wind, hand-sealing is recommended.

CAUTION

To avoid staining or sticking, do not double stack. When storing outside, stack on a raised platform.

13 Asphalt Shingles - 13 Bardeaux D' Asphalte 1 Bundle = Approximately 1/5 Square of 19.25"x 38.25" (489 mm x 972 mm) Shingles 5 Bundles = Approximately 1 Square / Covers Approximately 100 Square Feet of Roof Area (9.3 m²)

At the time of manufacturing, meets ASTM D7158 Class H; ASTM D3462; ASTM D3161 Class F; ASTM D3018 Type I; ASTM E108 Class A; UL 2218 Class 4 Impact Resistance; CSA A123.5.

Proposition 65 Warning: This product contains chemicals known to the State of California to cause cancer.

WARRANTY

This product is sold with an expressed Limited Lifetime Warranty. A copy of the warranty stating its terms and restrictions may be obtained from the distributor of this product, directly from Malarkey Roofing Products at (800) 545-1191, or visit the website at:

WWW.MALARKEYROOFING.COM.

Any deviation from printed instructions shall be the sole responsibility of the applicator and/or specifier and may void or place certain limitations on the warranty coverage.

TECHNICAL PRODUCT DATA SHEET





Product Description

Product Use: The Windsor[™], featuring the Scotchgard[™] Algae Resistant Shingle Protector from 3M, is an SBS polymer modified asphalt fiberglass shingle manufactured for the premium designer market. It provides increased flexibility, higher tensile strength, tear resistance, and premium impact resistance. The shingles have a 5³/₄" exposure, one of the largest in the industry.

Composition and Materials: The Windsor[™] is a mineral-surfaced, self-sealing shingle, made with an SBS polymer modified asphalt coating on a fiberglass reinforcement, and carries a Class 'A' fire rating.

Specifications	Properties	
Weight/Square (nominal)	350 lbs. (159 kg)	
Dimensions	19¼" (±¼") wide x 38¼" (±¼") long (489 mm wide x 972 mm long)	
Exposure	5¾" (146 mm)	
Shingles/Square	13 shingles (5 bundles/ square)	
Granule Adhesion	Maximum 1 g loss	
Fire Rating	Class 'A' (ASTM E108)	
Algae Resistance Warranty	Features a 20-year Scotchgard [™] Warranty	
Warranty	Limited Lifetime Warranty 110 mph (177 kph) Limited Wind Warranty	
As manufactured, Windsor [™] shingle meets the requirements of: ASTM D3018 Type 1; ASTM D3161 Class F; ASTM D3462; ASTM D7158 Class H; ASTM E108 Class A; UL 2218 Class 4 Impact Resistance; CSA A123.5.		

Technical Details

Application

Application Procedure: All shingles should be applied over a Malarkey underlayment, or an approved code-compliant substitute. Installation instructions are available on the shingle wrapper, at WWW.MALARKEYROOFING.COM or by contacting your local Malarkey representative. Industry standards are found in NRCA manuals. Shingles should be attached to decking by approved fasteners. Malarkey recommends the use of corrosion-resistant nails for fastening.

Precautions: Windsor[™] shingles require dry storage or plastic-covered storage and protection from the weather until applied. Do not use on roofs where the slope is less than 2"/12". For slopes 2"/12" up to 4"/12", additional deck protection is recommended. Windsor[™] shingles have a factory-applied self-sealing strip that activates in warm weather. When applied in cold weather or windy location, hand-sealing is recommended but not required if sealant activates. In high wind areas, nine nails are required. Contact Malarkey for further conditions and instructions.

Technical Assistance: Malarkey has technical services assistance available. Contact Malarkey for details at (800) 545-1191 or (503) 283-1191, weekdays 7:00 am to 5:00 pm Pacific Time.

Warranty

The Windsor[™] shingle carries a Limited Lifetime Warranty with a 110 mph (177 kph) Limited Wind Warranty, and can be combined with other Malarkey products for an enhanced 140 mph (225 kph) wind warranty. Contact your roofer, local distribution center, or Malarkey for full details. Details are available at WWW.MALARKEYROOFING.COM.

Windsor[™] and other Malarkey products are available throughout North America and Pacific Rim countries. Visit WWW.MALARKEYROOFING.COM for additional product information and availability.

Note: Malarkey Roofing Products[®] (Malarkey) inventory SKU numbers for this product: **285 Windsor**[™] featuring the Scotchgard[™] Algae Resistant Shingle Protector from 3M.

Effective 01.15 | Supersedes all previously published data

Check for more current version at: WWW.MALARKEYROOFING.COM

Corporate Office: 3131 N. Columbia Blvd., Portland, OR 97217-7472 • P.O. Box 17217, Portland, OR 97217-0217 Telephone: 503.283.1191 • 800.545.1191 • Fax: 503.289.7644 • WWW.MALARKEYROOFING.COM



TECHNICAL PRODUCT DATA SHEET



Product Description

Product Use: The Windsor[™] Starter, featuring the Scotchgard[™] Algae Resistant Shingle Protector from 3M, is an SBS polymer modified asphalt fiberglass starter shingle manufactured for use with the premium Windsor[™] shingle. It provides the same increased flexibility, higher tensile strength, tear resistance and premium impact resistance as the Windsor[™] shingle. The Windsor[™] Starter is manufactured blended to match the Windsor[™] shingle.

Composition and Materials: Windsor[™] Starter is a mineral-surfaced starter shingle made with an SBS polymer modified asphalt coating on a fiberglass reinforcement.

Specifications	Properties	
Weight/Bundle (nominal)	77 lbs. (34.9 kg)	
Dimensions	13¼" (±¼") wide x 38¼" (±¼") long (337 mm wide x 972 mm long)	
Exposure	5¾" (146 mm)	
Shingles/Bundle	22 shingles/ bundle	
Coverage/Bundle	70 LF (21.3M)	
Granule Adhesion	Maximum 1 g loss	
Fire Rating	Class 'A' (ASTM E108)	
Algae Resistance Warranty	Features a 20-year Scotchgard [™] Warranty	
As manufactured, Windsor [™] shingle meets the requirements of: ASTM D3018 Type 1; ASTM D3161 Class F; ASTM D3462; ASTM D7158 Class H; ASTM E108 Class A; UL 2218 Class 4 Impact Resistance; CSA A123.5.		

Technical Details

Application

Application Procedure: All shingles should be applied over a Malarkey underlayment, or an approved-code compliant substitute. Installation instructions are available on the shingle starter wrapper, at WWW.MALARKEYROOFING.COM or by contacting your local Malarkey representative. Industry standards are found in NRCA manuals. Shingles should be attached to decking by approved fasteners. Malarkey recommends the use of corrosion-resistant nails for fastening.

Precautions: Windsor[™] Starter shingles require dry storage or plastic-covered storage and protection from the weather until applied. Do not use on roofs where the slope is less than 2"/12". For slopes 2"/12" up to 4"/12", additional deck protection is recommended. Windsor[™] starter shingles rely on a factory-applied self-sealing strip that activates in warm weather. When applied in cold weather or windy location, hand-sealing is recommended but not required if sealant activates. In high wind areas, six nails are required. Contact Malarkey for further conditions and instructions.

Technical Assistance: Malarkey has technical services assistance available. Contact Malarkey for details at (800) 545-1191 or (503) 283-1191, weekdays 7:00 am to 5:00 pm Pacific Time.

Warranty

Windsor[™] Starter carries the Limited Lifetime Warranty with a 110 mph (177 kph) Limited Wind Warranty when used with Malarkey Windsor[™] shingles, and can be combined with other Malarkey products for an enhanced 140 mph (225 kph) wind warranty. Contact your roofer, local distribution center, or Malarkey for full details. Details are available at WWW.MALARKEYROOFING.COM.

Windsor[™] Starter and other Malarkey products are available throughout North America and Pacific Rim countries. Visit WWW.MALARKEYROOFING.COM for additional product information and availability.

Note: Malarkey Roofing Products[®] (Malarkey) inventory SKU numbers for this product: **212 Windsor™ Starter** featuring the Scotchgard[™] Algae Resistant Shingle Protector from 3M.

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