



DESIGNER SHINGLE LINE



ALL-WEATHER PERFORMANCE  
NEX<sup>®</sup> POLYMER  
MODIFIED ASPHALT



RESISTS IMPACT  
CLASS 4 IMPACT RATING



REDUCES AIR POLLUTION  
3M<sup>™</sup> SMOG-REDUCING  
GRANULES



UPCYCLES TIRES & PLASTICS  
REDUCES LANDFILL WASTE

DESIGNER SHINGLE LINE  
Performance Engineered, Sustainably Designed  
**WHEN IT MATTERS<sup>™</sup>**





## Family Built

"A family business based in Oregon since 1956, we at Malarkey Roofing strive simply to make the best shingle in the least environmentally impactful way."

Gregory Malarkey  
President, Malarkey Roofing Products®

## PERFORMANCE

### MALARKEY® WINDSOR® DESIGNER SHINGLE

Made with NEX® Polymer Modified Asphalt Technology

#### UPCYCLED TIRES & PLASTICS

Polymers from rubber tires and plastic bottles improve shingle durability while reducing landfill waste.

#### NEX® POLYMER MODIFIED ASPHALT

Asphalt core of shingle is rubberized with virgin synthetic rubber polymers (SBS) to enhance shingle strength, flexibility, and resilience.

#### POLYMER MODIFIED ADHESION

Up to 50% more adhesion bonds and twice the number of rain seals than standard shingles. Proprietary synthetic rubber adhesive (SEBS) resists dry-out and delivers extreme protection from high winds, wind-driven rain, and delamination.

#### ROOF DIMENSION

Up to 40% greater exposure than comparable designer shingles, and up to 22% greater thickness than standard architectural shingles for enhanced roof dimension and street appeal.

NAILING AREA

19 1/4"

38 1/4"

5 3/4"

#### FIBERGLASS MAT

Provides structural reinforcement and increased tear strength.

3 LAMINATE SEALS

RAIN SEAL  
WIND SEAL  
RAIN SEAL  
WIND SEAL  
WIND SEAL

#### 3M™ COPPER GRANULES

Reduce black streaks caused by algae growth.

3M™

#### SMOG-REDUCING GRANULES

Clean the air by reducing air pollution.

#### 3M™ ROOFING GRANULES

Ceramic-coated granules protect shingle from aging effects of weather and UV sunlight.





## Clean Air

“Along with planting more trees, we view smog-reducing technology, embedded into mainstream roofing materials, as a great step forward in addressing air quality.”

*Jonathan Parfrey  
Executive Director, Climate Resolve*

## SUSTAINABILITY

### PERFORMANCE ENGINEERED

**All-Weather Performance** – Shingles are in a constant state of expansion and contraction caused by changing temperatures. Unlike standard shingles, which prematurely become brittle and crack from the stress, NEX® Polymer Modified Asphalt Technology **rubberizes shingles for enhanced all-weather flexibility, strength, and resilience** to better withstand temperature swings and weather extremes.

**Resists Impact** – Virgin synthetic rubber polymers (SBS) and upcycled rubber and plastic polymers add durability, tear strength, and **our highest impact protection from hail and debris**. Class 4 impact rating [highest rating possible]. May be eligible for insurance discounts.

**Resists Wind & Rain** – Eight bonds [3 laminate, 3 wind, 2 rain] of proprietary synthetic rubber adhesive [SEBS] seal shingles and provide **our highest protection from wind and wind-driven rain**. Wind warranties from 110-140 mph.

**Resists Algae** – Blend of algae-resistant 3M™ Copper Granules on shingles featuring Scotchgard™ Protector, offers **our highest protection from unsightly black streaks**.

**Resists Fire** – Shingles meet **highest fire rating** [Class A].

### SUSTAINABLY DESIGNED

**Lasts Longer** – Granules are a shingle's primary line of defense. Polymer rubberization enhances asphalt's natural thermo-cycling resilience and grip, resulting in up to **65% greater granule adhesion than the ASTM standard [D3462]**, and longer product life.

**Reduces Air Pollution** – 3M™ Smog-Reducing Granules harness sunlight to photocatalytically convert smog (NO, NO<sub>2</sub>) into water-soluble ions (NO<sub>3</sub>), actively reducing air pollution. **Each average-size roof has the smog-fighting potential of 2 or more trees.**<sup>1</sup>

**Upcycles Tires & Plastics** – Polymers from recycled tires and plastic bottles improve shingle strength and durability while reducing landfill waste. Anti-aging technology inherent in these materials adds even more protection from damaging UV sunlight. **Each average-size roof diverts the equivalent of 5 rubber tires and 350 plastic milk jugs from the landfill.**<sup>2</sup>

**Cleaner Manufacturing** – NEX® Technology results in much **lower emissions than the highly-pollutive oxidation process** used to make traditional shingles.

# NEX<sup>®</sup> POLYMER MODIFIED ASPHALT TECHNOLOGY

*Superior Performance, Longer Life, More Sustainable*

Standard shingles are made with **100-year-old technology called oxidation**, which uses oxygen and extreme heat to deliberately age (harden) asphalt to raise its softening point so it doesn't melt on hot roofs.

This process is highly pollutive [TONS of annual air pollution] and has the adverse effect of significantly degrading asphalt's natural pliability, causing standard shingles to prematurely become brittle, crack, and lose hold of their protective granules.

Malarkey Roofing pioneered a better way. Instead of oxidation, we use polymers [molecular chains that make up rubber and plastics] to enhance shingle performance. Our unique formulation combines high-grade asphalt with synthetic polymers to rubberize shingles for exceptional all-weather responsiveness, superior granule adhesion, and enhanced wind, rain, and impact resistance.

We also incorporate 'upcycled' rubber and plastic polymers from used tires and recycled hard plastics (ex. milk jugs, shampoo bottles) to improve shingle strength, durability, and resilience, greatly extending shingle life and preventing these waste materials from entering our landfills and oceans.

The result - NEX<sup>®</sup> Polymer Modified Asphalt - is a better, cleaner, more sustainable technology and fortifies every Malarkey shingle.

## INNOVATION

### NEX<sup>®</sup> POLYMER MODIFIED ASPHALT TECHNOLOGY [FORMULATION]



#### HIGH-GRADE ASPHALT

Weathering  
Waterproofing

+



#### SYNTHETIC RUBBER POLYMERS (SBS)

Strength  
Flexibility

+



#### UPCYCLED RUBBER POLYMERS

Elasticity  
Resilience

+



#### UPCYCLED PLASTIC POLYMERS

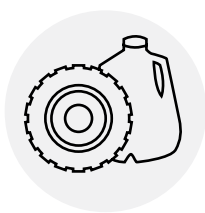
Strength  
Durability

=



#### NEX<sup>®</sup> ASPHALT TECHNOLOGY

Performance  
Sustainability



#### What is Upcycling?

Automobile tires are highly engineered for all-weather performance and durability – attributes also desired in shingles. By incorporating used tires, as well as post-consumer hard plastics, not only do we make our shingles more environmentally friendly by recycling these products, we also benefit from the advanced technology inherent in the products themselves, 'upcycling' these products [incorporating recycled materials to improve product performance] to improve our own.

**Each roof diverts the equivalent of 5 rubber tires and 350 plastic milk jugs from the landfill.<sup>2</sup>**



## The Industry's First SMOG-REDUCING SHINGLE

FEATURING 3M™ SMOG-REDUCING GRANULES  
TIME MAGAZINE TOP 50 INVENTIONS OF 2018

Air quality is a concern for us all, which is why we created the industry's first smog-reducing shingle, using 3M™ Smog-Reducing Granules.

These granules, which blend inconspicuously into every shingle, harness sunlight to convert smog into water-soluble ions, actively reducing air pollution.



## What is Smog?

Smog is a form of air pollution resulting from the interaction of UV sunlight with chemicals in the atmosphere like nitrogen oxides ( $\text{NO}_x$ ) that get into the air primarily from the burning of fuel [ex. vehicle emissions].

As a gas, smog is easily inhaled, making it extremely hazardous to humans and animals, and can lead to severe health risks including lung tissue damage, bronchial infections, and heart problems.

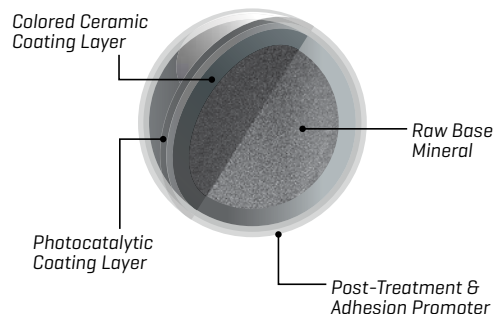
## ENVIRONMENT

### SMOG-REDUCING SHINGLE [HOW IT WORKS]

**All Malarkey architectural and designer shingles include 3M™ Smog-Reducing Granules.** These granules contain a photocatalytic coating which, when activated by the UV rays of the sun, creates the energy needed to break apart airborne water molecules (ex. humidity) into their component parts [i.e.,  $\text{H}_2\text{O}$  breaks into  $\cdot\text{H}$  and  $\cdot\text{OH}$ ].

The newly formed  $\cdot\text{OH}$  molecule, called a hydroxyl radical, binds to smog molecules ( $\text{NO}$ ,  $\text{NO}_2$ ), chemically transforming them from a dangerous, inhalable gas into a water-soluble nitrate salt *solid* ( $\text{NO}_3$ ), a more plant-usable form of nitrogen that is deposited on the roof and washes away with rainwater.

Improving Our Climate  
**3M™ Smog-Reducing Granules**

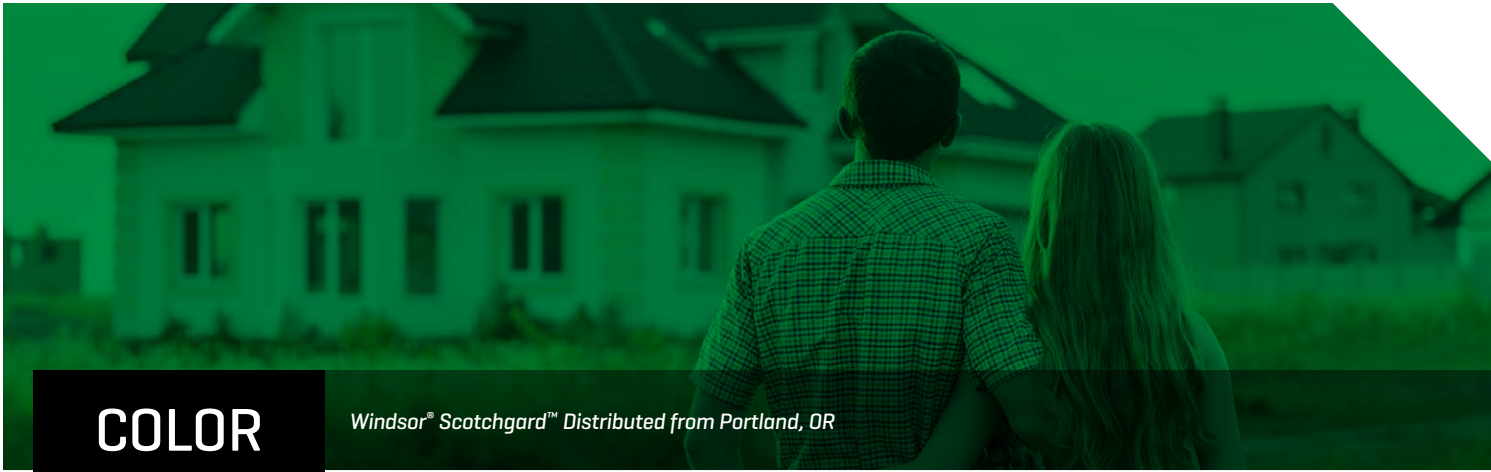


### What Do Trees Have to Do with It?

Trees are nature's filters. Not only do they clean particulates out of the air by trapping them on leaves and bark, they also absorb pollutant gases like nitrogen oxides ( $\text{NO}_x$ ) through leaf stomata. Stomata are small windows on green leaves that let carbon dioxide and other gaseous pollutants in and oxygen out. Like trees, Malarkey shingles also help fight air pollution by incorporating 3M™ Smog-Reducing Granules which convert smog gases into water soluble ions that settle on the roof and wash away with rainwater.

**Each roof has the smog-fighting potential of 2 or more trees.<sup>1</sup>**

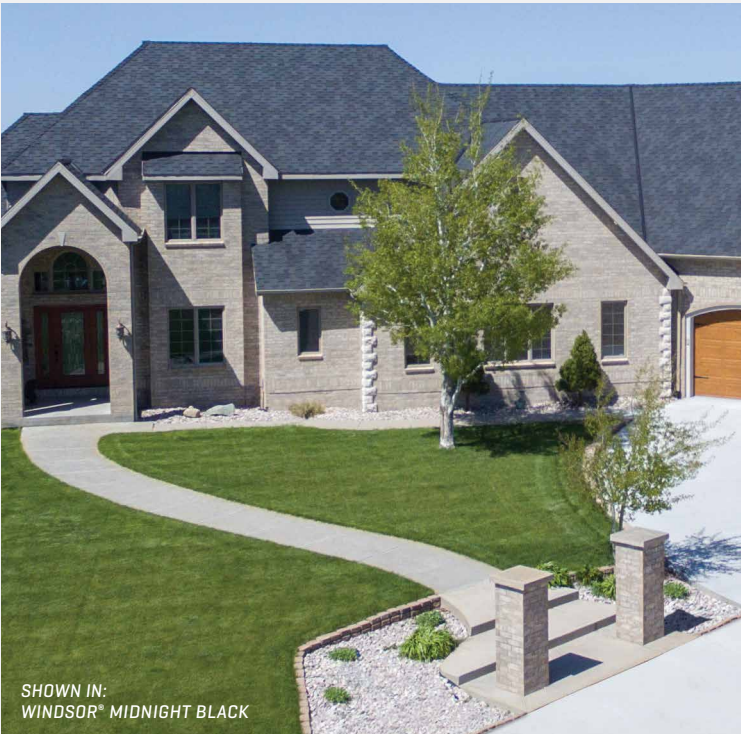




Windsor® Scotchgard™ Distributed from Portland, OR



BLACK OAK



SHOWN IN:  
WINDSOR® MIDNIGHT BLACK



MIDNIGHT BLACK



STORM GREY





## One Roof at a Time

"Granted, it's just one roof, but if everyone starts choosing a shingle that reduces landfill waste and also fights air pollution, who knows what the end result will be."  
— James Martinez, Homeowner

Matching colors available in high-profile EZ-Ridge™ and EZ-Ridge™ XT as well as standard low-profile RidgeFlex™ hip and ridge shingles.



**NATURAL WOOD**



**WEATHERED WOOD**



**HEATHER**



**ANTIQUE BROWN**





Architectural & Designer Shingle Lines	GOOD HIGHLANDER® NEX® / HIGHLANDER® NEX® AR	BETTER VISTA® / VISTA® AR	BEST LEGACY®/LEGACY® SCOTCHGARD™	Designer WINDSOR® SCOTCHGARD™
Asphalt Technology	NEX®	NEX®	NEX®	NEX®
Impact Rating [Class 4 Highest]	NA	Class 3	Class 4	Class 4
Tear Strength*	+10%	+25%	+35%	+40%
Thickness		+10%	+19%	+22%
Cost	\$	\$\$	\$\$\$	\$\$\$\$
<b>Warranties*</b>				
Limited Lifetime Shingle Warranty	Lifetime	Lifetime	Lifetime	Lifetime
Right Start™ Period [years]	10	12	15	15
'Your Choice' Warranty <sup>3</sup>	Yes	Yes	Yes	Yes
Streak Resist™ AR Algae Warranty [years]	10	12	NA	NA
Limited Lifetime Algae Warranty**	NA	NA	Lifetime	Lifetime
Standard Wind Warranty [mph/kph/years]	110/177/10	110/177/12	110/177/15	110/177/15
Enhanced Wind Warranty [mph/kph/years]	130/209/10	130/209/12	130/209/15	140/225/15
*VERSUS STANDARD SHINGLES, AS MEASURED PER ASTM D3462.      **INCLUDED ON SHINGLES WITH SCOTCHGARD™ PROTECTOR.				

## CHOICE

Malarkey Roofing Products® has earned GreenCircle Certification for Waste Diversion from Landfill at all its manufacturing facilities.

## Testimonials

"As one of the largest roofing companies in Alaska, we know extreme weather, which is why Malarkey has been at the core of our product offering for over 30 years."  
– Pat Reilly, Owner, Rain Proof Roofing

"Last week, with winds up to 68 mph, we had over 100 calls for shingles blown off of roofs in our area yet didn't lose a single shingle from our Malarkey shingle line. They are made for these conditions."  
– Jeremy Nowak, President, Bob's Roofing

"Through our work with Malarkey Roofing Products, we have been able to upcycle hundreds of tons of recycling polymers, creating value from materials like plastic containers, bottle caps, and drinking straws, diverting these plastics from our landfills and oceans."  
– Jodie Morgan, CEO, GreenMantra® Technologies



<sup>1</sup> Approximation assuming standard roof of 30 squares. Source: Lawrence Berkeley National Laboratory and 3M.

<sup>2</sup> Approximation assuming standard roof of 30 squares.

<sup>3</sup> Select our transferable Limited Lifetime Shingle Warranty or one from a competitor – your choice.

**TEST COMPLIANCE:** All Shingles – ASTM D7158 Class H, ASTM D3462, ASTM D3161 Class F, ASTM D3018 Type I, ASTM E108 Class A Fire Rating, and CSA A123.5, UL 2218 Class 4 (Windsor® and Legacy® lines), UL 2218 Class 3 (Vista®), ICC Approval – ESR-3150 (Windsor®, Legacy®), ICC-ES AC408 (Legacy® and Highlander® NEX® lines), FBC Approval #14809 (Windsor®, Legacy®, Vista®).

**DISCLAIMER:** Photographs of shingles may not accurately represent their true color or the variations of color blends that will appear on the roof. **Before installation, five or six shingles should be laid out and reviewed for desired color.** Colors and specifications subject to change without notice. Shingle colors not available in all regions or product lines. Scotchgard and Scotchgard Protector, including the 3M logo, are all trademarks of 3M.

+ For complete information on all warranties, including 'Your Choice' Warranty and the Right Start™ non-prorated period against manufacturing defects, please reference **Malarkey's Shingle and Accessory Warranty available at [www.malarkeyroofing.com/warranty-center](http://www.malarkeyroofing.com/warranty-center)**.

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MEETS CSA A123.5  
STANDARDS

