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3M Industrial Mineral Products Division

Mining a Wealth of Ideas

Roofing Contractor's Guide to the Scotchgard™ Algae Resistant Roofing System



3M Innovation

7. What is the most effective asphalt shingle product available to inhibit algae growth and prevent the black staining?

Look for the Scotchgard™ logo on quality shingle brands with the Scotchgard™ Algae Resistant Roofing System. Many shingles feature algae resistance. But your assurance of long-term algae and stain resistance can only be achieved when the precise level of granules in the Scotchgard™ AR System is uniformly distributed across the surface of the shingle in combination with standard colored granules.

8. How can a homeowner be sure of the performance of an Algae Resistant (AR) product?

Consult with a quality professional roofing contractor about the Scotchgard™ Algae Resistant Roofing System. The Scotchgard™ logo on quality shingle brands is your assurance of long-term algae and stain resistance.

9. Do asphalt shingles with the Scotchgard™ Algae Resistant Roofing System cost more than regular asphalt shingles?

Yes, but many experts and homeowners agree that it's much less expensive to prevent algae growth from the outset. The price difference is minimal when one faces the accumulated cost of frequent roof cleanings. The extra cost associated with the Scotchgard™ System refers to the materials only, because the labor cost to install these shingles is the same as it is for regular shingles.

4. Are algae harmful to shingles?

There are no proven damaging effects of algae accumulation on shingles. However, the dark algae streaks are the number one appearance-related problem reported to roofing contractors.

Consumers commonly mistake the dark stains for faulty shingles, leading them to complain to the contractor or manufacturer about a shingle's performance.

5. How do algae stains spread?

When environmental conditions are right for algae development, the problem rapidly expands, covering an entire roof. Once algae are present in an area, airborne spores are carried from rooftop to rooftop, infesting whole neighborhoods. All roof types, including wood shakes, concrete and clay tile, and asphalt shingles are susceptible to algae infestation.

6. What methods are available to clean an algae-infested roof if a homeowner isn't ready to replace the roof?

Cleaning is the most commonly used homeowner defense against algae build-up on asphalt roofing shingles, but at best, it's only a "quick fix." Typically, roofs must be cleaned frequently to minimize obvious staining. Not only are repeated cleanings costly (\$400-\$700), but some cleaning methods can damage a roof and shorten the life of the shingles. Excessive scrubbing or power washing loosens the granules—and in essence, the color. It also deteriorates the asphalt once the protective granules are lost due to sunlight, causing further degradation to the shingle. Potent bleach solutions also can damage shrubs and bushes, and can be caustic to the homeowner or roof cleaner.

As a quality professional roofing contractor, you understand that a roof which retains its natural beauty and performance helps increase a home's overall value.

But no matter how beautiful a home may be, the presence of algae growing on the roof causes unsightly discoloration which could increase maintenance costs and reduce property values.

There are numerous misconceptions about roof algae. The purpose of this 3M brochure is to provide accurate facts about roof algae in order to help you sell to your customers even more effectively. You will also understand how to make more money on your Algae Resistant (AR) shingle jobs by selling the Scotchgard™ AR System.

A Closer Look at Roof Algae

The black streaking typically found on homes in areas where moisture settles on shingles is not caused by mildew or fungus; it's roof algae.

The most common blue-green type has been identified by 3M scientists as *Gloeocapsa magma*. Algae spores are carried by the wind, which is why so many homes in the same neighborhood can end up with this problem.



Important Additional Information

Following are questions and answers that provide detailed, helpful information about algae staining on asphalt shingle roofs.

1. What causes black streaks on asphalt roof shingles?

Unightly black stains on shingles are often mistaken for fungus, mildew, dirt or oil, but are actually caused by a hardy type of algae. This common problem has increased during the past 20 years, indiscriminately settling on rooftops from coast to coast. Dark algae streaks are visible when algae cover roofing granules—the ingredient in a shingle that gives vibrant colors of white, cobalt blue or hunter green, for example, to rooftops.

2. How do algae grow?

The primary type of algae found on rooftops—*Gloeocapsa magma*—thrives in humid environments, often appearing first on the north slope of a roof where extra shade and moisture support its growth. Algae can derive mineral nutrients from fillers such as calcium carbonate in asphalt shingles. Increased use of moisture attracting calcium carbonate fillers cause asphalt shingles to retain moisture longer, thus promoting algae growth.

3. Why are algae black?

The organism *Gloeocapsa* produces a dark-pigmented sheath to protect itself from ultra-violet rays. By the time the black streaks are noticeable, the algae usually have been growing for months or years—the result of generations of dead algae cells built up over time.

Continued next page

The Biggest Contractor Benefit: Earn More Money

Scotchgard™ is a very well known national brand with high consumer awareness.

The Scotchgard™ brand means algae resistance.

Major shingle manufacturers offer algae resistant shingle brands with the Scotchgard™ AR System.

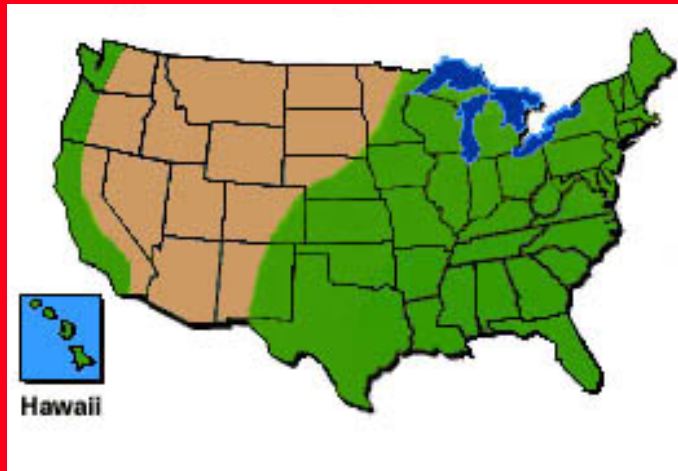
Research has demonstrated that consumers will pay a price premium for asphalt shingles with Scotchgard™ Algae Resistance.

As a roofing contractor, you can earn an additional \$300-\$500 per average roof by recommending that your customers purchase asphalt shingle brands with the Scotchgard™ AR System.



Roof Algae Follow Climate and Geography

Algae are seen on roofs in more than 80 percent of the United States, but the problem is most severe in the Southeast, Middle Atlantic and Pacific Northwest. Anywhere there is significant humidity, roof algae are prevalent. Typically, algae begin forming on the north side of a roof where moisture collects and stays.



Algae Danger Zone Map



Moderate

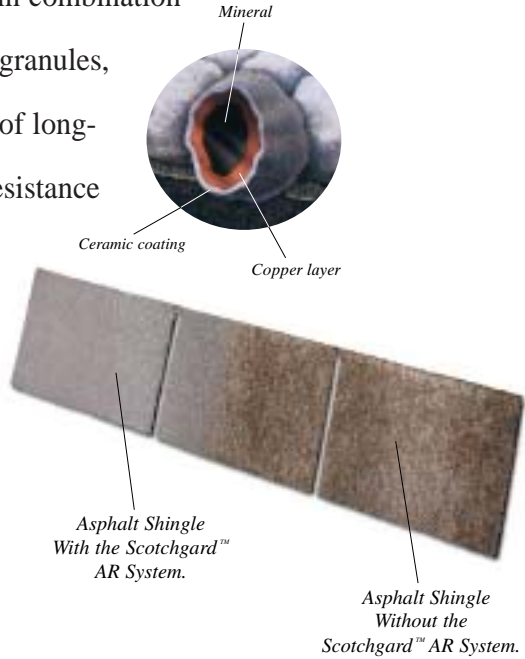


Heavy

3M Innovation Drives the Technical Solution to the Roof Algae Problem

Roof algae can be prevented.

When the precise level of granules in the Scotchgard™ AR System is uniformly distributed across the surface of the shingle in combination with standard colored granules, that is your assurance of long-term algae and stain resistance



Important Benefits of the Scotchgard™ Algae Resistant Roofing System

The following benefits can result from
the Scotchgard™ AR System:

1. The Scotchgard™ logo on quality shingle brands is your assurance of long-term algae and stain resistance.
2. A roof retains its aesthetic appearance thus increasing appeal.
3. Expanded options in color selection mean customers don't have to choose black to try to "hide" algae stains.
4. Lower overall cost than repeated cleanings over the life of the roof.
5. Environmentally responsible.
Won't harm plants and shrubs.

