THE PROBLEM: BLACK STREAKING ROOFS

Black streaks running down your roof aren't a sign that the asphalt shingles are dissolving or that you need a new roof. Rather, ***you have roof algae***.

The organisms arrive on the rooftop as either spores or clumps of cells. If they land on the north side of the roof, where the sun is less harsh and moisture more plentiful, the algae will have a good environment to multiply, spreading in a delta down the slope of the roof.

Asphalt shingles contain limestone, which makes them heavy, durable and reflective. Roof algae over time will slowly consume the limestone, ultimately weakening the shingles.

Algae cells produce a dark pigment that acts as a sunscreen, protecting the cells from the sun. As this pigment accumulates on shingles, the roof becomes less reflective and absorbs more sunlight, which is transferred into the house as heat, raising cooling costs.

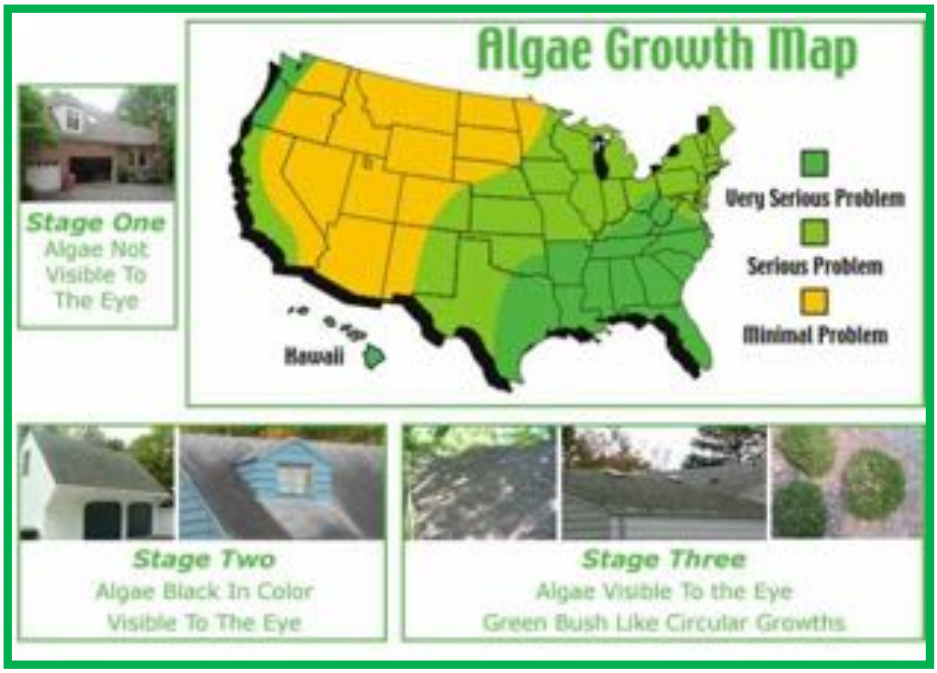
Roof algae are the first wave in a succession of organisms that can colonize and ultimately undermine a roof. The algae can eventually team up with a fungus to form lichen. Moss follows, building a small layer of soil that might catch seeds from bird droppings. By the time grass sprouts between the shingles, it's past time for a new roof. ***The process can take years***.

An Ancient Organism

The growths on the roof are cyanobacteria, or blue-green algae, a phylum of organisms that has dwelt on Earth for about 3 billion years. As primordial photosynthesizers, they were the originators of oxygen in the atmosphere.

Gloeocapsa Magma is the species that blackens roofs. Scientists at 3M have identified the most common form of ***roof algae***.

These algae spores are ***carried by the wind***, which is why so many houses in the same neighborhood end up with this problem.



During the last 20 years, this particular algae strain has become hardier and has been able to migrate to less humid environments than it has in the past. And in areas where it traditionally has been found, the staining is showing up earlier, is more severe and settles on a greater number of roofs. *This is a "growing" problem throughout the United States.*

The main reasons for the rapid spread and notice ability are thought to be:

- ✓ Rising humidity and temperatures combined with more and more bacteria spores promotes their spread with these favorable conditions.
- ✓ Fiberglass shingles (the most commonly seen amongst today's residential homes) are made with limestone as a filler (in the asphalt). These shingles hold moisture and organic "bacteria food" material longer (especially on the North-side in the Midwest) than the paper, asphalt, ceramic shingles of 20+ years ago. Additionally, these particular algae **enjoy the limestone as a food source.**

Once the bacteria have become noticeable, the stains will continue to worsen year to year. There is debate over the actual harmfulness of this particular bacterium to roofs, as there is little supportive scientific research. However, most "experts" within the subject area conclude the bacteria to be harmful, if left untreated, as the growth holds moisture within shingles causing premature aging, rotting, and/or granule loss.

Roof Cleaning: Recommended By Shingle Manufacturers.

Companies like Owens Corning and GAF, and also the ***Asphalt Roofing Manufacturers Association*** recommend a low pressure chemical application using certain cleaners to restore shingles suffering from roof algae, followed by a low pressure rinse. We use the cleaners and methods recommended by these companies, for a safe and damage free roof cleaning. If your shingles are still in good shape but have roof fungi on them, having your roof cleansed will allow you to get the full life out of your shingles, saving you thousands of dollars.

Did You Clean Your Roof With Chlorine Bleach?

If so, your shingle life could have been shortened because bleach can dry out and crack the roof shingles and fungus and roof mold will grow sooner. It is interesting to note that some manufacturers recommend that roofs actually be cleaned with chlorine bleach or chlorine bleach and TSP (Tri-sodium Phosphate) ---of course, they are in the business of selling shingles, therefore, the quicker your roof succumbs, the quicker they will be able to sell you a new roof.

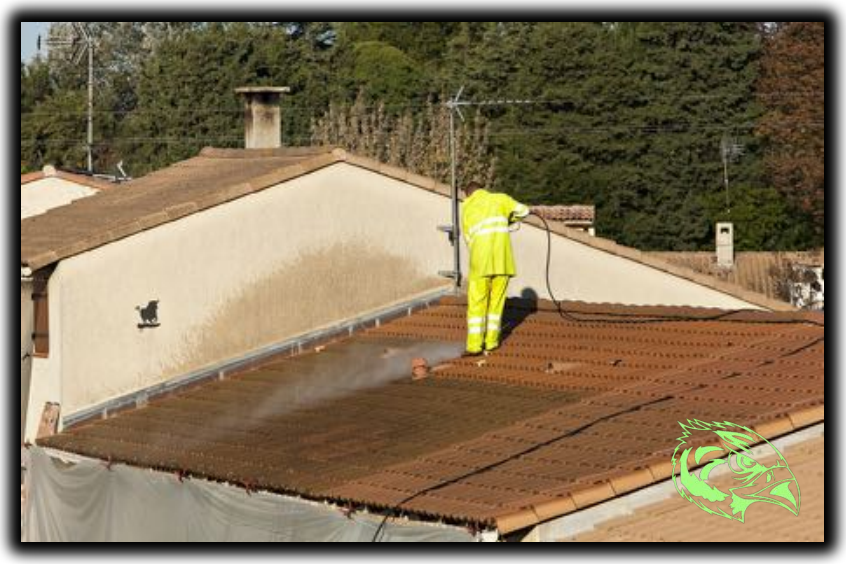
Chlorine Bleach is not meant to be a roof cleaning chemical, because it *kills surface algae but cannot penetrate the roof shingle* granules to remove black mold root structures. Roof stains return in as few as 9 months, and the roof mold is worse than before. Roof Cleaning using chemicals like chlorine bleach and TSP (Trisodium Phosphate) as a cheap roof cleaning spray to make your shingles look new again is not advisable. Chlorine bleach / TSP chemical combination can kill plants, and the phosphates hurt the environment. Chlorine bleach also dries out a shingle roof causing curling, and ultimately shortening asphalt roof shingles life. Bleach runoff may also void your termite warranty.

Roof Cleaning ... Routine Roof Maintenance

Roof Cleaning should be part of your annual maintenance plan.
Why? Because roof algae stains are a reality of Home ownership and Clean roofs also protect property values.
How often you clean your roof depends on several things:

There are many uncontrollable variables that help hasten algae/fungus staining.
First, roof mold fungus will appear initially on the north side of the house and roof.
This is because moisture stays there longer and, algae/fungus needs three things to grow: moisture, heat and a nutrient.
Other variables beside the direction your house faces are the type, grade and manufacturer of your shingles, whether you have a water source (pond, ocean, lake or pool) nearby creating abundant moisture and how hot and humid the weather is. Continuous warm weather promotes fungus growth.

Also, if you have trees near your house and they shade the roof, that promotes quicker fungus growth. If you haven't cleaned the leaves and pine needles off, that keeps your roof ripe for fungus growth too.



These variables combine to create the need to clean your roof immediately!
Here's why:
As the algae and fungus grow on your roof,
they eat away the base of the shingle and expand and contract with the outside temperature.
This growth and movement loosens the granules, creating premature granule loss, dramatically shortening the life of your roof.