

## Algae Discoloration of Roofs

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For many years, roof discoloration caused by algae has been observed throughout the United States and Canada. The discoloration usually has a brown to black appearance and may be mistaken for fungus growth, soot, dirt, moss, or tree droppings.

*Gloeocapsa magma* is probably the most prevalent of several algae species that contribute to discoloration. All species are transported through the air and tend to collect and grow on roofing structures and other outdoor surfaces. Natural pigments produced by these algae may cause white or light-colored roofs to gradually turn dark brown or black. Discoloration may appear uniform or as streaks. The algae discolorations should not be confused with moss or tree droppings, which typically produce only localized discoloration. Consult the shingle manufacturer for information concerning the effects of moss growing on asphalt shingles and recommendations for its removal.

Algae discoloration of roofs is most widespread in the Gulf States and along the Northwest and Eastern Seaboards. It is not, however, confined exclusively to these regions. Algae growth occurs to varying degrees in all regions of the U.S. and southern regions of Canada, especially those subjected to warm, humid conditions. It should be noted that almost all types of roofing systems are susceptible to algae discoloration. It is, of course, most readily visible upon light-colored roofs, while it is not so visible upon darker shades of roofing.

Algae discoloration can be difficult to remove from roofing surfaces. Discoloration may be lightened by applying a solution of liquid household bleach (sodium hypochlorite) and water. The effectiveness of such cleaning is only temporary, and the discoloration may recur. Directions for mixing solutions of these ingredients may vary among shingle manufacturers and depend on the amount of discoloration. Other cleaning chemicals or methods should not be used without the approval of the shingle manufacturer. The cleaning process may make the roof slippery; therefore, ARMA encourages the use of professionals when attempting to clean shingles.

The solution should be gently dispersed on the roofing surface. Use normal precautions for handling bleach, including eye protection and rubber gloves. Be sure to apply it carefully to avoid damage to other parts of the building and the surrounding landscape. Avoid scrubbing the surface, as this friction may loosen and remove granules. If possible, always work from a ladder and/or walkboards to avoid direct contact with the roof surface. The solution should be

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left on the roof for at least 15 minutes but no more than 20 minutes. Finally, rinse the solution from the roof by gently spraying the surface with water. Again, be warned that this solution application and rinse process will make the roof slippery and potentially hazardous to walk on during treatment.

When considering reroofing, several types of algae-resistant roofing shingles have been developed and are now commercially available. If your roof appears to be vulnerable to algae discoloration, you may consider algae-resistant shingles, as these asphalt roofing products are specifically designed to inhibit algae growth for extended periods of time.

DO NOT use a power washer or any type of brush or broom to clean algae from the roof surface. High-pressure washing systems are likely to damage asphalt roofing and should not be used to remove algae or for any other purpose, such as cleaning other foreign stains or dirt on asphalt roofing.

**WARNING:** Because it is dangerous to walk, climb, or work on a roof, ARMA recommends that only trained professionals engage in such activity. If you choose to do so, exercise extreme care, comply with all government safety regulations, and follow all safety work practices, precautions, and procedures, including but not limited to manufacturer's instructions, labels, and warnings.

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