



technical bulletin

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Algae Discoloration of Roofs

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

The primary species of algae being observed is *Gloeocapsa Magma*. This type of algae is contained in and transported through the air, and tends to collect and grow upon roofing structures. Natural pigments produced by this algae may cause a white or light colored roof to gradually turn dark brown or black. The algae discolorations should not be confused with moss or tree droppings, which typically produce only localized discolorations.

This type of roof discoloration has been most widespread in the Gulf States and along the Northwest and Eastern Seaboards. It is not, however, confined to only these regions. Algae growth occurs to varying degrees in all regions of the country, 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 white or pastel roofs, while it is not so visible upon darker shades of roofing.

Algae discolorations are difficult to remove from roofing surfaces, but may be lightened by applying a solution of chlorine bleach, trisodium phosphate, and water. Solutions for these ingredients may vary between shingle manufacturers and depend on the amount of discoloration. Solutions range from one cup TSP, one gallon bleach and five gallons of water, to one cup TSP and 2.5 gallons each of bleach and water.

First, gently disperse this solution on the roofing surface. Use normal precautions for handling bleach. Be sure to apply it carefully to avoid damage to other parts of the building and its 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. Observe all possible safety precautions when working on or near the roof. Finally, rinse the solution from the roof by gently spraying the surface with water. Be warned that this solution application and rinse process will make the roof surface slippery and potentially hazardous to walk on during treatment.

The effectiveness of such cleaning techniques are only temporary, and discoloration will likely recur. However, several types of algae resistant roofing products have been developed, and are now commercially available. These asphalt roofing products are specifically designed to inhibit algae growth for extended periods of time.

Caution!

High pressure washing systems for algae removal should not be used.

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