

ALGAE DISCOLORATION OF SHINGLES

Occasionally aging light coloured asphalt shingle roofs may show signs of brown to black stained appearance. Often mistaken as dirt, moss, or even granule loss, it is caused by a type of common, air-borne algae known as *Gloeocapsa*. Natural pigments produced by the algae cells result in the dark discoloration.

This algae phenomenon is more common in warm, humid climates but can also be found throughout North America. Although most noticeable on light shingle colors, the algae stain can be present on all colors of asphalt shingle roof.

It is important to note that the staining caused by the algae is not indicative of a shingle defect. This is an aesthetic concern caused by natural environmental factors and has not been shown to shorten the service life of the shingles.

If the homeowner wants to restore the natural colour and appearance of the roof, there are various options available:

1. High pressure washing is NOT recommended although it may be offered by roof cleaning service companies. This could result in damage to the asphalt shingles, primarily due to the loosening and removal of the mineral granular surfacing. It is very important that the granules be left intact on the shingles as they provide protection for the asphalt from ultraviolet radiation.
2. For anyone with a re-roof or new roof construction, it is possible to install a zinc, copper, or other galvanized type metal strip near the ridge of the roof. As the metal ions oxidize and erode off of the metal strip, they wash down the roof inhibiting algae growth. (This is why the staining on algae discolored roofs is usually less or non-existent below metal roof attachments such as flashings, aluminum-sided dormers, antennae anchor wires, etc.) Please consult your roofing material wholesaler or dealer for information on these types of metal strips.
3. The algae discoloration is difficult to completely remove from shingle surfaces, but it may be lightened with a cleaning solution made of diluted chlorine bleach. A typical solution would be one part chlorine bleach to one part water. The ratio of the products in the solution may vary and depends on the amount of discoloration to be removed. Gently spray the solution on the shingles. Apply the solution carefully to avoid damaging other parts of the building or the landscaping below. Mild scrubbing with a soft-bristled brush on severely stained areas may be required, but avoid harsh scrubbing as this may loosen and remove the granules. Thoroughly rinse the solution off the roof with a gentle

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spray from a hose. Historically this cleaning option has been shown to be only a temporary relief from the algae discoloration. Repeated applications may be required every few years.

CAUTION:

- **Observe all safety precautions when work on or near the roof.**
- **Use normal precautions when handling bleach including eye protection.**
- **The bleach solution may make the roof slippery so it is advisable to work from a ladder or a walkboard to avoid walking directly on the shingles.**

Commercial roof cleaning solutions may also be available on the market. CASMA makes no comments or recommendations regarding these cleaning solutions.

4. Some shingles are also available with small quantities of granules that have been treated with zinc or copper included in the shingle's mineral surfacing. These treated granules will inhibit the algae growth for a certain period of time.