

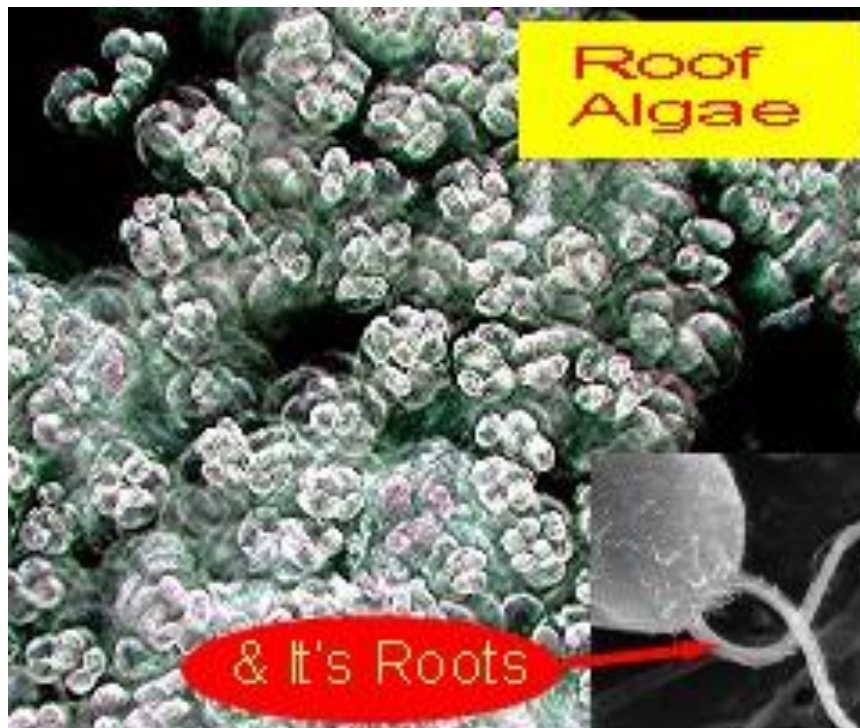
What Can I do about Moss on My Roof?

At Penfolds, we often get asked “What can I do about the moss on my roof?” or “Will Algae block shingles keep the moss from growing on my roof?” To answer these questions, let’s first have a look at all the types of organisms that might grow on your roof, and which are often referred to collectively as ‘moss’.



The first one is ‘Blue-green Algae’. The funny thing about blue-green algae is that it is neither Blue/green, nor it is an algae! First of all, as

illustrated in this picture, it is actually black in colour. The black colour comes from the protective sheath that the organism builds up around itself, to protect it from the UV rays in sunlight. It is also sometimes mistaken for oil, dirt, mildew, tree sap or mould.

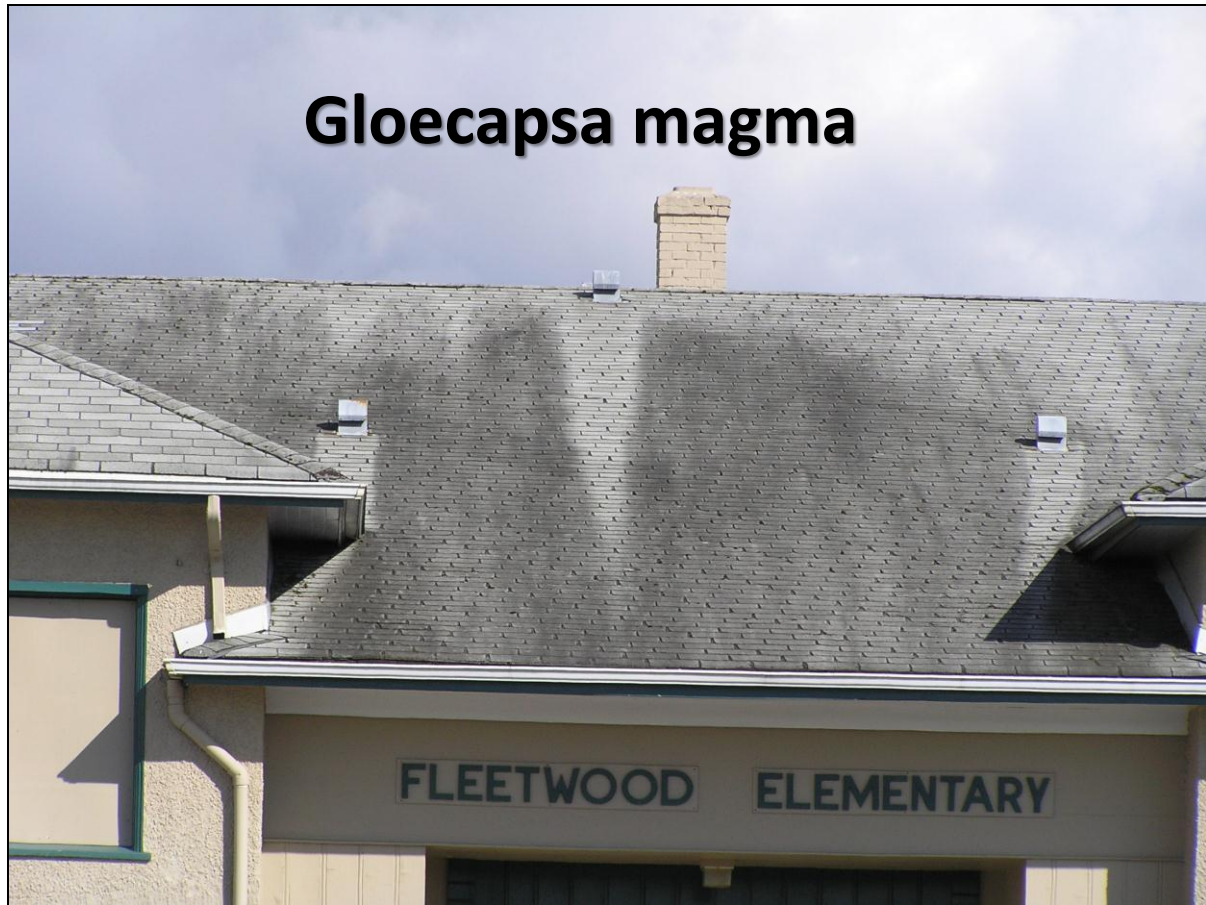


Secondly, blue-green algae is actually a bacteria... a 'cyano-bacteria' to be exact... with the Latin name '*gloeocapsa magma*'.

Being a tiny bacteria, *gloeocapsa magma* is easily blown about by the wind, moving from house to house, until it sets up a colony on your roof. Like the flu, it keeps on spreading.

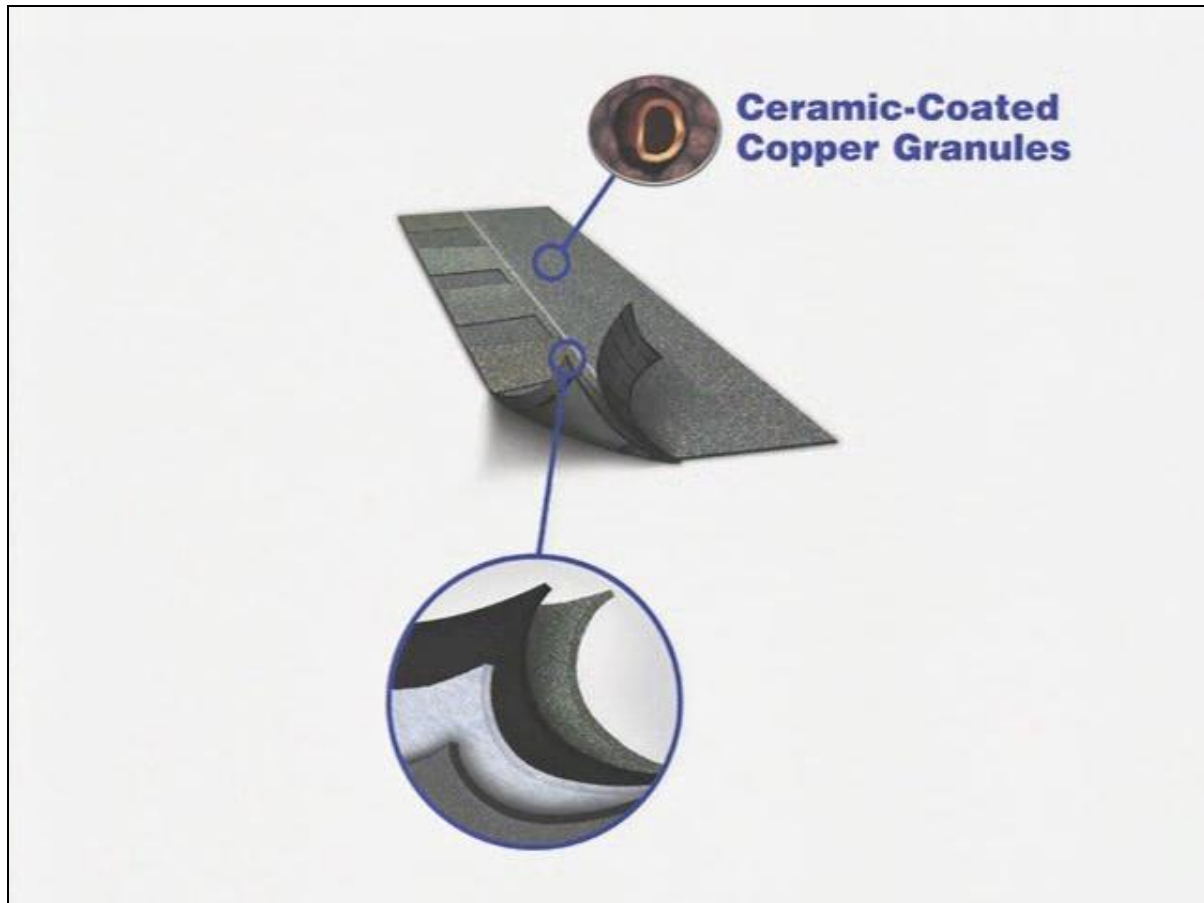
It actually uses the calcium carbonate found in shingles as its food source. As long as it has enough warmth, moisture, and your shingles to feed on, it

will keep on growing and spreading. This is the culprit that 'Algae Block' shingles are designed to overcome.



You may have noticed that on some roofs where *gloecapsa magma* is growing, there are clean streaks underneath the vents or flashings. What is happening is that the rain washing down over the lead or zinc coated metal releases metal ions over the roof surface below. This inhibits the growth of the *gloecapsa*, and creates clean streaks.

Algae Block shingles are designed to work in exactly the same way.



When Algae Block shingles are manufactured, some of the coloured ceramic granules are replaced with ceramic coated copper granules.



These Algae Block granules consist of a small bead of copper, covered in a porous ceramic coating to match the colour of the shingles. Rainwater washing over the granules releases copper ions onto the roof surface,

effectively killing the cyanobacteria.

Penfolds' exclusive *CedarTwin Classic* shingles contain Algae Block and are effective for ten years in



controlling the growth of *gloeocapsa magma*. Over time, the algae block granules will become leached out, and will gradually lose their effect,

but they are guaranteed to provide *ten years* of protection.

***CedarTwin Ultra* shingles contain double the amount of Algae Block granules – in fact 10% of the total granule count is algae block granules – and qualify to use the brand name *Scotchguard*. They are guaranteed effective against *gloeocapsa magma* for *twenty years*.**

MOSS

The next most common growth on a roof is moss.

Unlike *gloeocapsa magma*, moss is a plant. Under a microscope, you can see that it has leaves, roots and stem, just like any plant.

It is a shade loving plant, so does better under overhanging trees or on the north side of the roof. It requires water and some kind of debris on the roof for food.

Moss does not actually grow on the roof itself, but on the debris that accumulates on your roof.



- Requirements:**
- 1. Moisture**
 - 2. Shade**
 - 3. Debris for Food**

If the roof is kept clean, moss cannot grow. The more abundant the shade and debris to feed on, the more moss will grow.

Algae Block shingles are not designed to control moss. The only way to prevent moss is to keep the roof clean.

LICHEN

Another type of growth sometimes seen on a roof is lichen. Lichen creates spots of varying sizes and colours, scattered around the roof in a random manner.



There are a many different types of lichen, but all share one thing in common. They are actually two

organisms living together in what is called symbiosis.

Lichen occurs when a bacteria and an algae join together, forming an entirely different type of organism. Algae



Block shingles may have a dampening effect on lichen, in that they help prevent the invasion of the bacteria; however, once the lichen is formed, Algae Block is no longer effective. The Algae Block warranty does not cover lichen.

FUNGUS

Finally, let's talk about one last type of roof growth, that is fungus, or 'slime'.



Sometimes where there is dirty water from a gutter or from behind a skylight, washing down over the roof, you will see a greenish slime starting to grow, surrounded by a black stain. Although the black area looks something like *gloecapsa magma*, it is a stain from the dirty water. And the greenish part, which is often mistaken for moss, or is assumed to be 'blue-green algae' because it is green, is actually a fungus.

Fungal growth can start wherever dirty water spills out onto a roof. Algae Block shingles are not designed to control this fungus. The only way to control it is to keep cleaning



off the roof, or to find a way to divert the dirty water off the surface of the roof. Sometimes extra downpipes or drain troughs can be added to divert the water.

Whatever type of problems you may be experiencing with your roof, talk to a Penfolds Technical Advisor or contact the Repairs Department to learn what might be done with your roof and whether or not CedarTwin Algae Block Shingles may be able to help.