



# Roof Cleaning for Property Managers and Board Members

by John Browne



**E**xperienced property managers familiar with the effects of repeated roof cleaning know that using high pressure or harsh chemicals can greatly accelerate the aging of a roof, and many just accept it as “the cost” of keeping roofs clean—but there are effective ways to avoid this.

## Background

Proper maintenance is obviously important to a community’s image, protection of property values, and homeowner enjoyment of the community. It is also essential for controlling both short- and long-term costs. Property managers and board members taking on the responsibility of evaluating and planning the long-term direction and finances of a community should always be aware of what the long-term effects of maintenance, or lack of it, will be on the long-term costs to the community.

Roofs are a prime example. If properly installed and maintained, a quality roof should last 25–30 years and, in some cases, up to 50 years. Unfortunately, many roofs in South Florida are in need of major repair or replacement after ONLY 15 years—or roughly 50 percent of their expected useful life!

Why? This usually happens when there is no plan of regularly scheduled inspection and maintenance to find and fix small problems before they become much bigger problems. Another reason is repeated cleaning using high pressure and/or harsh chemicals. While effective if done correctly, repeated use of these methods will damage the roof surface and, more importantly, the underlying weatherproofing.

While the reasons for cleaning are important—aesthetics, property values, energy efficiency, and increased longevity of the roof—not much is gained if the roofs are being damaged during the cleaning process. But whatever the reason is for cleaning, if it is going to be done, it is in your best interest to

know what choices are available and how these will affect the roofs in order to make the best choice as to how to approach it properly.

### The Problem

The black streaking typically found on roofs is not caused by dirt, mold, mildew, or fungus; scientists at 3M have identified it as roof algae. During the last 20 years, this algae has become hardier and has migrated 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 is settling on a greater number of roofs. This is a "growing" problem throughout the United States.

### How Can It Be Cleaned?

Typical roof cleaning methods involve either pressure cleaning or chemical cleaning with chlorine bleach or sodium hydroxide. Each method has its advantages and disadvantages.

A chlorine and water solution can be used followed by a thorough rinse. Of course, since chlorine can be toxic to people and plants, proper care should be taken to protect the surrounding property from overspray and runoff. The benefits to using chlorine include a much faster cleaning process and minimal rinsing as compared to other methods. This translates into much less wear and tear on the roof—particularly asphalt shingle roofs.

Sodium hydroxide based cleaners are generally advertised as safer for the landscaping, but sodium hydroxide is caustic, very toxic, and care should

always be used to protect surrounding property. Sodium hydroxide is also a very effective degreaser, so high levels in a cleaning product can cause irreversible damage to an asphalt shingle roof. These products generally require much more rinsing than the chlorine method, and the rinsing process can also be potentially damaging to the roof if not done correctly. A quality sodium hydroxide based product should not require any more than 100 psi to effectively rinse a shingle roof, and even then, some granule loss should be expected.

Pressure cleaning is an option that should only be used on concrete, clay, or metal roofs. Pressure cleaning eliminates most of the landscaping and chemical concerns, but it is very time-consuming, and it exerts tremendous force on a surface that is not really designed to handle it. In addition, repeated pressure cleaning can wear away the surface of some tiles that are only covered by a thin layer of coloring. When this happens, the grey concrete color starts to show through and the roof must be stained or painted.

### These Methods Are Not a Long-Term Solution

While these methods are relatively safe and effective when done properly, repeated cleaning using them will lead to premature aging of the roof. The natural erosion that occurs over time from the basic forces of heat, cold, wind, and rain alone are enough to bring most roofs to the point where annual inspections and minor repairs are a necessity to prevent significant repair costs. But when the roof is repeatedly subjected to high pressures or harsh chemicals, the aging of the roof is greatly accelerated.

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With repeated cleaning, concrete tiles are more likely to shift, slip, or break, and asphalt shingles are more likely to become brittle and crack. When this happens, there is a greater chance of damaging the roof simply by walking on it. And once gaps are created and subsequent pressure cleaning or chemical cleaning is administered to a roof, these gaps provide water or the caustic solutions with a path to the protective roof underlayment, moisture barriers, metal valley underlining, and flashings—increasing the chance of roof leaks and costly repairs.

**What Is the Best Alternative?**

The most effective long-term strategies will minimize the use of high pressures and harsh chemicals by stressing preventative maintenance from the start. These strategies should include periodic roof inspections/maintenance, keeping the roof free of debris, and preventing algae discoloration before it begins. A proper program of preventative maintenance and algacide protection will eliminate the need for future cleaning and the potential for damage that comes along with it—giving the homeowner and/or community an aesthetically pleasing roof for the full life of the roof.

Various companies throughout the U.S. manufacture products that can inhibit the growth of roof algae for months and sometimes years with each application. The most appropriate algae prevention products are those that are guaranteed, specifically designed for roofs, and have EPA approval for use on roofs.

*John Browne is the owner of Roof-A-Cide in Palm City, FL. ■*

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