

Roofing Committee Report on Roof Longevity

As a Willowbend Homeowner, you will be faced with the decisions of how to clean your roof, what products to use, and whom will you hire to get the job done. Surely one of the biggest home investments is your roof. The roof manufacturers tell us their tiles should last a hundred years, but roofs are failing in southern Florida after only twenty years and a replacement roof can easily cost you \$25,000 to \$45,000. If it is not the tiles, which fail in twenty years, then logically it must be other components like the sub-roof, the flashings, the fasteners and/or other metal parts. In the past the way we cleaned our roofs may have even shortened their lifespan. There is a lot of information and misinformation out there. The task of the Roof Cleaning Committee has been to sort through that information and provide some recommendations. Choose your cleaning product, the roof cleaning contractor, and their process very carefully primarily because the roof is a very important, expensive part of your house. However, you will also want to remember that you are responsible for any damage to both your landscaping and your neighbor's landscaping when you select the approach you will use.

The following information is being provided by the committee as a way of sharing what many hours of research have identified. Unfortunately, you'll see that there is no recognized best way to clean all roofs. There are many opinions, products, and processes. More importantly, many people make claims but have no supporting evidence for those claims. We hope this helps you reduce the amount of time you spend learning about roof cleaning. It is your house and of course your responsibility. Even this information will become outdated in time, but hopefully it provides a start for everyone. We would caution that if you see something that you are not familiar with, please perform your own due diligence before making that final decision.

The committee has discovered that there are some roof cleaning procedures which are harmful to tiles and some roof cleaning chemicals which can actually corrode metal flashing and fasteners in a relatively short period of time. Rather than accept information from manufacturers we tested several products to discover their effect on galvanized metals such as those found on your underroof. We will share that information in the following pages. We have also found there are processes and soft-cleaning products which promote a longer-lasting roof. The following general guidelines may help you determine how you will have your roof cleaned.

Roof Cleaning General Guidelines:

Our roofs become dirty in Florida because of the climate and proximity to the gulf, which fosters the growth of various types of mold, mildew, and algae that accumulate on our roofs. Not only are soiled roofs unsightly, but also left unattended their condition will only become worse and could potentially bother some homeowner's health. As you make your decision how to clean your roof, please consider the following guidelines and information from the roofing committee:

- Keep all trees and bushes trimmed back from overhanging or contacting your roof or house. Much of the debris that accumulates falls from overhanging trees.
- Always use a professional roof cleaner with experience in cleaning and spraying. Foot traffic on your roof should be avoided or kept to a minimum and only by professionals. There is no specific state or local roof-cleaners license, but ask to see if they are a licensed general contractor. Also ask to see their insurance certificate. Contractors tell the committee they are seldom ever asked by an owner for an insurance certificate. We would also recommend with any job, before hiring anyone, confirm the currency of their license and insurance certificate with the issuers.
- If you select an experienced roofing company, they can also inspect and evaluate the roof and make any required repairs when they are on site. Periodically roof tiles may break from changes in temperature and loud noises. Due to improper installation, tiles may also become loose and have to be cemented in. A certified roofing contractor should do these repairs.
- **Members should never use high pressure when cleaning their roofs as this process removes sealants, pits the surface, and erodes the edges of the tiles.** High pressure power washing can also strip color and strips the fine particles surface layers exposing a coarser and more porous sub layer. Power washing uses pressures of 3000-6000 psi. The Professional Roof Cleaners' Association and manufacturers recommend using lower pressures no greater than 1200 psi with the nozzle no closer than one to two feet above the roof surface. Pressure wands can be fitted with a "soft wash" nozzle which lowers the pressure.
- Some vendors prefer to use pivoting head brushes. High RPM spinning bars (similar to water sprinklers but much higher rpm) deliver the spray only inches from the roof at pressures near 2800 psi. As the machine is moved about the roof, the spinning bar may strike the high parts of roof tiles with a reasonably high possibility of breaking them.
- Most vendors prefer to use sodium hypochlorite solution diluted down several times with water. Several tile manufacturers such as Hanson, Entegra, and Boral recommend a dilute solution (3%-7%) hypochlorite or chlorine solution. The vendors buy 9% hypochlorite (like you buy from Pinch a Penny) and then dilute it. Their solutions are applied at concentrations 10,000 to 40,000 times more concentrated than your pool water. **Despite the manufacturers' recommendation the committee has tested the diluted solution on galvanized roof fittings and found the chlorine readily corrodes the fittings.** In fact only a small pile of rust remained after only two weeks. If applied at high pressure the solution is bound to reach the subroof, the flashings, and the valleys. **During one of the Lee Wetherington Open Houses, Lee Wetherington stated, "Do not use chlorine to clean your roofs, it eats up the valleys."** The

chlorine cleans the roofs faster than other chemicals, but there are safer alternatives. Some vendors are now using soft-wash chemicals that are safer on landscaping, the environment, and roof parts, but may take a period of several months to leave your roof clean. **(See the section on soft-wash chemicals below.)**

- Algae and mold spores will move from roof to roof so it may be beneficial to clean houses in the same proximity at the same time. It might possibly keep them clean longer and help leverage price discussions with the cleaning company you select.
- There are water-based clear sealers, which can be applied after your roof is completely clean. They should protect the tile surface and inhibit accumulation of mold, algae, and dirt.

Products for cleaning roofs:

Soft Wash Products... The National Association of Roof Cleaners recommend a group of organic compounds applied in a manner that minimizes damage to the roof tiles and subroofs. They can be applied as a spray or jetted as a foam from the ground or ladders **essentially eliminating roof traffic and high-pressure jets which can damage tiles and subroofs.** Most of these chemicals are mixtures of surfactants/detergents and algaecides, which contain no harmful additives such as, bleach, chlorine, acids, or sodium hydroxide making them quite safe to use. Surfactant molecules are designed to “make water wetter” with one end of their molecules bonding tightly to water while the other end designed to penetrate oils, dirt, and other contaminants. Although they can be sprayed onto the roof and left to penetrate the tiles for an hour or so before rinsing them off, they are most effective if left on the roof without rinsing. The chemicals then continue to dissolve or destroy algae, fungus, and soil and release them each rainfall over a three to six month period. Enough chemical residue remains on the tiles to protect them for a few years. If a roof is heavily soiled (black), the roof should first be cleaned by soft wash professionals using low pressure and then sprayed with the surfactant products. Once the roof is cleaned a periodic reapplication of the product should prevent the roof from being pressure cleaned again. Some commercial names for these products are **Mold Power, Spray and Forget, Wet and Forget,** and **Bio-Shield.** The two products most familiar to the committee and commonly used in this area are **Spray and Forget** and **Mold Power.**

1. **Mold Power** is a product developed for and marketed by Power Source Industries on Clark Road, a supplier and servicer of chemicals and equipment for roof cleaning professionals. A number of cleaners are trained in the application of the product and routinely use it. Mold Power is widely used in Palmer Ranch subdivisions. Sarasota County uses it to clean and protect their water towers. **Mold Power has been successfully applied to several homes in Willowbend. It was applied to a badly soiled (black) roof at 562 Crane Prairie in February 2015. In the following four months there were few rains and consequently the roof did get cleaner but it either needed more time and rain or an additional application. In June 2015, the owner, a member of this committee, had a low-pressure water-only cleaning done on sections of the roof followed by a second foam application on the entire roof.**

PROS: Local vendors use foam cannons to jet the product onto roofs. Not only does the foam hold the chemicals in place without runoff but also the cannons can reach heights or distance of 35 feet from the ground. Like any detergent it is harmful if swallowed, and the spray can irritate eyes and skin if not rinsed off. There are no other known health hazards. As a test, it has been successfully sprayed onto begonias and gardenias to remove pests with no harmful effect to the plants. Several cleaners like All Washed Up and Sarasota Soft Wash by JMO routinely wash Willowbend roofs and are trained in the use of Mold Power. **The committee looks favorably on the use of this product. In our test galvanized metal was essentially not affected by the Mold Power solution.**

CONS: Like other soft-wash chemicals badly soiled roofs may require some low pressure cleaning and agitation before using Mold Power. Since the product has a residual effect without low pressure cleaning, it may take 3-6 months for the roof to appear clean, perhaps a small price to pay for not damaging your roof. Homeowners using this product must be willing to wait for delayed results. Some vendors are reluctant to use these products because they want to leave a roof immediately clean for neighbors to see.

2. **Spray and Forget** is a proprietary algaecide developed about 14 years ago to remove exterior staining caused by mold, mildew, algae, moss and lichen. It is marketed as a do-it-yourself product, and it's available in Home Depot, Ace Hardware, Lowes and True Value. The manufacturer also claims that if the directions are followed, the product is safe for children, pets, plants, and roofing materials. Like Mold Power it is a mixture of organic surfactants. Once sprayed on the roof, it leaves a residue that continues to clean and prevent further contamination. The committee knows of no Willowbend homeowners who have used this product, but one homeowner sprayed it on his cedar shingles in New England and was pleased with the way it cleaned up the shingles over a period of several months. **Like Mold Power, when tested, Spray and Forget had no effect whatsoever on the galvanized test strips.**

PROS: The product can be applied from the ground or from ladders with no rinsing required and no roof traffic. The roof will clean itself over a period of 60-180 days and should stay clean for 2 to 5 years. **The committee feels this is a reasonable choice and is testing the product at 654 Crane Prairie Way, which is also a heavily soiled roof.**

CONS: Like other soft-wash products, Spray and Forget requires time to clean the roof. If a homeowner is willing to have a low pressure, non-chlorine on the roof cleaning before Spray and Wash application, they will have immediate results. Otherwise, they and Lighthouse Property Management will have to wait for the roof to appear clean. At this time, we do not know of any vendors who have applied this product, but All Washed Up appears willing to try it.

3. **Roof-A-Cide** (also known as **Magna-Bon Pro Tek**) is a copper based algaecide/fungicide used for the control of algae, fungi, and bacteria on roofing materials. It's composed of 19.8% Copper Sulfate Pentahydrate with 80.2% other ingredients.

We have confirmed that it is registered and approved by the EPA. The manufacturer claims that the product, when applied following the proper direction, is safe around pets, plants, and children. They have provided an "exemption from the requirement of a tolerance" issued by the EPA as proof of that

claim. They also claim that with the dilution rate used and the light spray application on the tiles, galvanized roofing materials (which are what was supposed to be used as that was the code) should not be affected at all.

After a thorough cleaning with hot water and pivoting head brushes, the Roof-A-Cide product is applied in a spray across all of the tiles. Unlike other soft-wash products, it is applied after the tiles are cleaned with only a low-pressure spray on a day with little to no wind. The product is absorbed by the tiles and keeps working to prevent the regrowth of any mold, etc. The treatment is guaranteed for 2 years and also that the roof will never have to be cleaned again, only retreated as necessary. Any callbacks during the 2 years are covered by the guarantee.

PROS: The main component of Roof-A-Cide is copper sulfate, which has a track record in controlling algae growth in stock tanks and ponds. It is only available through authorized applicators who have purchased the rights to sell Roof A Cide. These firms are predominantly roofing companies with years of experience but more importantly, the product manufacturer claims they are trained in the correct application of the product. They will generally provide a roof inspection before cleaning and can perform any repairs needed at that time. This product is more expensive than most, but the price can be negotiated down if multiple customers sign up for the program.

CONS: The committee demonstrated the corrosive nature of this product. The galvanized metal strips immersed in this product were very heavily corroded. The zinc galvanizing was essentially removed from the strips leaving them to rust. The company claims that since the product is applied as a low-pressure spray on the surface of the tiles, little of the solution would reach the metals parts of the subroof. We have no way to test that claim. Because of the franchise fees, this product is considerably more expensive than other products. **Due to the corrosive nature of this product, the committee was unable to unanimously recommend it.** A house at 630 Crane Prairie Way has been treated with this product.

4. **Sodium Hydroxide** - This cleaner is very corrosive and not biodegradable. Sodium hydroxide is the strongest base and an extreme irritant to eyes and skin. **The committee does not recommend using these products.**

5. **Chlorine (Sodium Hypochlorite)** - The use of chlorine in diluted form is recommended by the tile manufacturers. **The committee feels that the potential corrosive effects outweigh the benefit. See previous discussion on chlorine.**

6. **Tri Sodium Phosphate** - It is a phosphate based salt solution that is still being used by some cleaners. It requires the addition of chlorine if there is mildew, and it's not very good for mold. **Phosphates promote the growth of algae and are not allowed by the EPA in many fertilizers. The committee does not recommend using this product.**

7. **Roof Resolve** - This is a do-it-yourself product that can be purchased only through their on-line store. It is an Oxygen/Hydrogen Peroxide based product. **The committee does not have sufficient**

information to evaluate this product but has some reservations of peroxides, which are irritants to skin and other tissues.

Providers of Roof Cleaning Services:

1. Soft Wash Providers:

a. **Sarasota Soft Wash (JMO)** - This is a cleaning company that has been in business for 7 years and on Angie's List for 2 years with an "A" rating with 22 reviews. There were some minor complaints regarding communication issues. This company is working with the committee to demonstrate the **Mold Power** product capabilities and how it might be applied. They will discuss with each homeowner whether a low-pressure (less than 2000 psi) water-only cleaning is necessary before applying the foam. **Fully licensed and insured. (941) 228-2412**

b. **All Washed Up** - Grant Wickline is a reputable cleaner recommended by Power Source. He has power washed many roofs in Willowbend using chlorine but also has considerable experience using Mold Power. He will work from ladders and also uses foam jet cannons. **Fully licensed and insured. (941) 993-0773**

c. **Kirkey Roofing** - This professional roofing contractor (licenses #CCC1327984 & CCC0029586) has been in business for 67 years, BBB accredited since 2013 and holds an "A+" rating. Angie's List gives an "A" rating with 24 reviews over 7 years. They use a Tri-Sodium Phosphate solution, and we were told it could be applied from the ground. **The committee thinks this is a reasonable provider but does not recommend the product.**

2. Roof A Cide Provider:

Avery Roof Services - This is a professional roofing contractor (license #CCC1329935), and they have done a house at 630 Crane Prairie way. Deborah Karasick is the Sales Director, (941) 451-4056. They have only been in business 5 years, but they have been a member of the BBB for the last 2 years and have an "A" rating with only 1 minor complaint, and it was closed. They have an "A" rating on Angie's List as well, although again, it has a reasonably short business history. They have been very responsive to our inquiries and have offered discounted pricing if we have numerous owners sign up at the same time. **The committee thinks this is a reasonable provider if the homeowner wishes to choose the Roof-A-Cide product and cleaning process.**