



Sodium Hypochlorite, Sodium Percarbonate or Sodium Hydroxide for Roof Cleaning?

by Linda Chambers, Brand and Sales Manager for
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The most popular chemical used today by roof cleaners is still “bleach” or sodium hypochlorite. It is also the chemical of choice of ARMA, the Asphalt Roofing Manufacturers Association.¹ But saying that today’s roof shingles are primarily made of asphalt is no longer true.

Over the last 30 years or so manufactures have been adding more and more additional ingredients to shingle make up to produce a laminated product of specialized papers,

fiberglass, and organic materials such as limestone, with only a small amount of asphalt to even be left in the single of today.

Limestone is one of the major reasons Gloeocapsa Magma, or roof algae, has become a more noticeable problem to home owners and a boon to roof washers. These black streaks are unsightly and, if left untreated, will literally eat the singles apart, since the algae consumes the limestone as it grows. The dark coloration seen is the protective UV covering of the algae as it spreads.

Everyone knows high pressure washing is not favored for shingle washing since high pressure can damage shingles by removing the granular surface and can void the manufactures warranty of the home owners roof. So today the industry applies other wash systems that can come in various forms.

Sodium Hydroxide

Some contractors still use sodium hydroxide, one of the first chemicals found in roof cleaners. Sodium hydroxide is a high alkaline product, sometimes called lye or caustic soda. If used in high concentrations and left to sit on any type of asphalt it can loosen or dissolve the bond of the shingle and granules since sodium hydroxide will break down petroleum-based products like asphalt. However, fewer and fewer of today’s shingles are made with much asphalt.

And it is not to say that sodium hydroxide products cannot be used to clean many types of roofing materials. Sodium hydroxide does clean the dirt, mold and algae, but cleaning solutions must be used at proper dilution rates and limited time durations, and must be

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thoroughly rinsed with high flow rates – but not high pressure rates – to remove the chemical, thus stopping any residual action.

The problem with sodium hydroxide is that if it is not completely removed from the surface – even after it has dried – it can be activated again and, once wet, continues its normal chemical reaction on petroleum based products. But sodium hydroxide is a fine product to use for cleaning tile, concrete or slate roof materials.

Sodium Hypochlorite

Now back to sodium hypochlorite. This system is not without some problems and new nay sayers of its use like to bring these up. Yes sodium hypochlorite will just become salt once the water has evaporated. If allowed to flood or cover plants without proper dilution, it can cause damage to the plant roots and leaves. If handled properly, it will not.

If used at high concentrations and left to sit on asphalt shingles, sodium hypochlorite can cause deterioration to them just like bleach does to clothes fibers with repeated washings. But if used at proper dilutions, plants treated by pre- and post- rinsing and complete rinsing of the solution from the roof at the time of cleaning, then these issues are just scare tactics used against contractors that use sodium hypochlorite. Also, I need to note that a small amount of sodium hydroxide is found in the 12% sodium hypochlorite sold today as a stabilizer of the mix.

Sodium Percarbonate

Today you hear the words “Soft Wash” used a lot. And this phrase can mean more than one thing. To some, a soft wash is just the fact that they are just using increased gpm (gallons per minute) of water to flush cleaning solutions off the roof instead of using a high psi (pounds per square inch) of water pressure to rinse the chemicals off – or, as others call it, a low pressure wash. So even sodium hydroxide or sodium hypochlorite contractors may say they are soft or low-pressure washers.

Others say soft wash is in fact no water rinsing at all. Instead, it’s just a spray on then let nature takes it course by allowing air



moisture and rain to do the rinsing. With many of these products, it is sodium percarbonate that is doing the work.

This oxygen-based system starts to work only as it is first mixed and applied with water to the roof surface. Since the carbonated action quickly stops once the chemical reaction with water is done, further or later rinsing of the product from off the roof will not matter. It is also the product of choice for cleaning wood shake roofs and is where the process was expanded to now include asphalt shingle roofs.

This relatively new player to the game is gaining ground with contractors pushing a “green” environmentally-friendly business focus. But even sodium percarbonate is mined from the ground as Trona, and has chemical treatments to purify it. It, like oil, is a limited resource that creates waste “tailings” that can be harmful to the environment.

I am not saying that moving to a supposed more eco-friendly cleaning product is not good for everyone. Rather, all three of these chemical cleaning methods have a place and do work. Those that try to bad mouth another contractor’s methods should be careful or may find that in just a very few years that his own perfect method has become the wrong way to do it.

Linda Chambers is Brand and Sales Manager for Soap Warehouse, where she has worked since 2007. Linda enjoys writing articles for industry publications, blogs and social media. She also travels for the company, exhibiting at trade shows and events. Visit the company’s website at SoapWarehouse.biz.

¹ http://www.asphaltroofing.org/pdf/tb_217.pdf - Technical bulletin “Algae discoloration of roofs”