

Maintenance of Concrete Pavers – The Benefit of Cleaning/Sealing Pavers

Maintaining concrete pavers is essential to keep the pristine presentation of your paved walkways, patios and entry ways. Cleaned/Sealed beautiful pavement will add a whole new dimension to your homes appearance and your outdoor entertainment/relaxation areas. Overall, pavers require little maintenance and will last a life time, especially if they are properly looked after. Maintaining your pavers will assist in keeping the appearance and prolonging the usable life of your outdoor living space.

Why Clean and Seal Concrete Pavers?

The first issue you may face with a newly completed paver project is efflorescence. What is efflorescence? Efflorescence occurs during the initial cure (which can take as long as a year to 18 months but usually occurs during the first 4 to 6 months after manufacture) of a cementitious (i.e. concrete) product such as pavers. It becomes noticeable when water either moves through (usually beneath) the paver or is driven out of it as a result of heat hydrating the concrete paver. This movement of water may bring salts (not commonly bound to but are nevertheless a natural component of concrete pavers) to its surface. As the water evaporates, it may leave salt behind which is seen as a white, fluffy deposit referred to as "efflorescence". Naturally weathering processes will eventually, over a 6 month to 18 month period, wear these deposits away. However, to gain the benefits of sealing prior to the end of that long period its highly recommended that prior to the first application of sealer you clean these pavers to remove the efflorescence, if any, that may be deposited upon your pavers. Other than removal of efflorescence you should also take into account that although concrete paving is very hard and durable its also exposed to harsh weather conditions, de-icing salts*, pollution, dirt, grease, leaf litter, tar, mold, mildew, moss, rust, etc. As they are porous, they can stain as a result of their exposure to these elements. Its high porosity makes it particularly prone to salt efflorescence. With the application of high quality, invisible impregnating ingredients in sealing agents, (after the pavers have been cleaned) sealed pavers are protected for a long period of time. The biggest benefit of a coated (sealed) surface is that it will not require high maintenance since sealed surfaces resist dirt and other environmental contaminates which can adhere to the pavers. All you may need to do to keep your pavers looking as attractive as they day they were installed and reasonably clean from accumulated dust and debris is to simply wash them between re-cleaning and sealing projects.

Applying a sealant to your pavers will also preserve the color and wear of the pavement. When concrete pavers are manufactured, pigmentation is used to create the different colors and the concrete holds the pigments in place. The added colors although intended to resist fading or discoloration, however, will overtime wear and fade as a result of exposure to environmental (both natural and man-made) factors and from the wear and tear of foot traffic. The cleaning and sealing of pavers will help to prevent the build up of dirt and the chance of erosion which may lead to fading and discoloration.

In addition applying a coat of sealant to your pavers may, depending upon the sealant chosen, intensify the color and pattern. Some sealants are designed to give your pavers that shiny wet look; the look you see after a rainstorm. Applying a quality sealant may also minimize concrete dust from spreading over the surface and entering your home.

Sealers, depending upon their type, oil based vs water based, however do need to be reapplied every so often to maintain the integrity of the coated surface. Water based sealants generally (depending upon conditions of exposure) need to be reapplied every 12 to 18 months whereas oil based sealants need to be reapplied every 2 to 3 years.

Benefits of Sealing Pavers

Here is a partial list of the benefits associated with sealing your pavers:

1. Enhance the Look of your Pavers

Sealers can provide a top coat that will enhance the color and texture of your pavers.

2. Protect your Pavers

Sealers provide a protective layer onto your pavers. This will help maintain your pavers from harsh weather conditions and from the effects of wear and tear.

3. Remove Stains

Prior to applying a sealer to your pavers you can as part of the cleaning process, take the opportunity to remove both common stains resulting from the accumulation of dirt, debris, de-icing salts* and leaves but also those “stubborn stains” from such sources as oil, grease, tar, plastic, rubber and rust (as well as from the effects of mold, moss and mildew) and when cleaned and sealed for the first time, the removal of any efflorescence that may have occurred. There are specialty products on the market that can be applied to accomplish the removal of the above mentioned “stubborn stains” (though mold, moss and mildew treatments may need to regularly re-applied as they are only effective from 6 to 8 weeks.) If your pavers are sealed these substances have difficulty being absorbed into the surface of the pavers, therefore, all you may need to do is wipe them off with a rag as soon as you notice them and that’s it! (See exception for mold, moss and mildew noted above.) If your pavers were not sealed your paved surfaces could start to look very tired and dirty after a short while.

Types of Sealers

Here are just some of the sealers you will find on the market:

- Stain Prevention sealers
- Glossy Sealers
- General Sealers
- Color Protection Sealers.
- High Gloss Sealers

The above may come in either oil, water or both bases. If you have previously used an oil based sealer you must continue to use oil based sealers. You can apply oil based over a water based sealer, but again all future applications must be with an oil based sealer. Overall oil based sealers not only last longer (2 to 3 years vs 12 to 18 months) than water based sealers but they also offer better protection. NOTE: Oil based sealers should only be applied

when ambient and surface temperatures range from 55 to 80 degrees F. Water based sealers can be applied up to 90 degrees F. Don't forget in mid-Summer surface temperatures can be as much as 20 degrees hotter than the air especially if the paver is a dark color. Also oil based sealers must be applied to a totally dry surface; so apply at least 24 hours after it has been cleaned, and when no rain is expected within 24 hours of its application. High humidity can also adversely affect the application of an oil-based sealer. Water based sealers are not as fussy, but then again they don't seal as long or as well an oil based sealer. If you prefer to have your pavers sealed with an oil based sealer its probably best to have that sealing take place in the Fall of early to mid Spring.

Although cleaning/sealing pavers is a reasonable DIY project as long as you obtain the right applicators (hard bristle brushes/brooms, nylon bristle sweep broom, 100% metal – do not use plastic pump sprayers as the materials used will damage and clog them up, etc,) and the application of quality cleaners and sealers (I would not buy these at a Home Depot and Lowes, rather I would go to a store that specializes in pavers.) **TFMD** can also arrange to have your pavers cleaned and sealed professionally. Just call me at **443 420-1335** for a quote.

* **VERY IMPORTANT NOTE:** Many manufacturers (Techo-bloc is one exception) do not warrant their products from the corrosive damage that de-icing salts, especially those consisting entirely or partially of sodium based salts (i.e. NaCl – the primary salt found in table or sea salt). In some cases the use of such salts may cause damage to the concrete pavers made by these manufacturers and their use may invalidate their warranty. Check with the manufacturer or whomever installed your pavers regarding the use of such salts and how it may affect your warranty.