



Surface Maintenance Guide



SEALERS 101 – IMPORTANT INFORMATION

Some basic knowledge of sealers can be important to the maintenance of surfaces and help you to pre-empt and prevent problems from occurring.

Impregnating / Penetrating Sealers - What they do and don't do

- Impregnating sealers work by repelling water, or, water and oil, not by blocking the pores of the material or creating a physical barrier. Because of this:
 1. Impregnators cannot stop acid etching of acid sensitive surfaces including the following stones: Marble, limestone, travertine and onyx. These stones contain calcite, a form of calcium, which reacts and dissolves on contact with acids, even mild acids such as lemon juice, cola and wine. In populated urban areas, rain can be acidic. The use of acid sensitive materials outdoors is not recommended as discoloration and acid damage may occur.
 2. Impregnators do not make surfaces impervious to staining. Given enough time, or enough pressure, water and oil can penetrate, so spills should be wiped up in a timely manner.
 3. Impregnators do not provide a physical barrier and therefore do not provide protection from physical wear and tear, scuff marks or dirt being ground into the texture or pits of rough surfaces.

What makes Dry-Treat impregnators special?

1. Dry-Treat STAIN-PROOF™, META CRÈME™ and STAIN-PROOF Plus™ are formulated using Dry-Treat's unique sealing technology – our sealer molecules are approximately 400+ times smaller than in other impregnators and penetrate much further into the pores to form a much deeper water and oil repellent barrier. This allows Dry-Treat impregnators to provide more than stain repellence, including premium protection against efflorescence, salt / freeze-thaw spalling and picture framing.
2. Dry-Treat sealers form permanent chemical bonds inside the pores, becoming part of the internal molecular structure of the treated material for superior longevity and protection and resistance to cleaning and UV light.
3. Dry-Treat sealers have huge active ingredient levels – up to 70%; compared to 5-10% for common impregnators

Topical sealers (coatings)

Topical coatings form an airtight physical barrier over surfaces. While this physical barrier provides excellent stain protection, there are many drawbacks to using topical sealers, which have seen the popularity of coatings dwindle over the last 50+ years in favor of impregnators:

1. Topical sealers can radically change the look / color of the surface material.
2. Topical sealers are generally slippery when wet and additives to increase slip resistance can help dirt collect and make cleaning difficult.
3. Topical sealers are not breathable, so potentially damaging moisture, which wicks up through the substrate, is trapped and prevented from evaporating and escaping.
4. Mold can grow, or efflorescence can collect under a coating, where you can't get to it to clean it away.
5. Topical sealers can yellow, whiten, crack, craze or peel over time and particular break down under UV light.
6. Topical sealers wear through, particularly in high traffic areas and the surface has to be completely stripped for the sealer to be re-applied, a time consuming and expensive procedure.



Part 1: INDOOR SURFACES

Floors

General recommendations for surfaces sealed with an impregnator

- Walk on/walk off mats and regular sweeping or vacuuming minimize grit (sand particles) which will scratch many surfaces. Note: Impregnating / penetrating sealers do not protect against physical wear and coatings scratch more easily than most flooring materials.
- Wipe / mop up spills as soon as possible. Impregnating sealers are 'breathable' i.e. the pores of the surface remain open so moisture can escape by evaporation. They work by repelling water (hydrophobic) or oil and water (oleophobic) not by blocking the pores. If left long enough spills can penetrate and leave a stain.
- Acid sensitive surfaces, including marble, limestone and travertine will be damaged on contact with acidic substances such as lemon juice, cola, vinegar and wine. These surface materials contain calcite, a form of calcium, which reacts and dissolves on contact with acids. Impregnating sealers don't stop liquids from making physical contact with the surface and therefore cannot prevent acid etching. Clean up acidic spills on acid sensitive materials ASAP to minimize damage.
- Cleaning up spills:
 1. First lift as much of the spill as possible with paper towel, a cloth or other absorbent material.
 2. Mop up the remaining spill with warm water. Adding Hanafinn Oxy-Klenza™, Rejuvenata™ ACTIVE enzyme cleaner or other suitable alkaline cleaner to the water should aid cleaning and help to neutralize the acid
 3. If the spill has been left too long and has dried or caused a stain, refer to the section on stain removal

Regular cleaning

General dos and don'ts:

1. Light cleaning can be performed as regularly as necessary to stop buildup of grime and dirt.
2. Daily light cleaning may be required in high traffic commercial areas, with spot mopping of spills in food court areas.
3. Hanafinn Rejuvenata™ ACTIVE or other suitable pH neutral or mild alkaline cleaner is recommended.
4. Cleaners with detergents can leave a residue which is difficult to rinse off and collects dirt.

Rejuvenata™ ACTIVE

Rejuvenata™ ACTIVE is an environmentally responsible, safe, natural enzyme cleaner which can be used for light regular cleaning, heavy duty cleaning or stain removal of dirt and grime, including stains caused by oil, mold, food and beverages.

1. TEST PRODUCT ON A SMALL AREA BEFORE FULL APPLICATION.
2. Remove dust and dirt from surface by sweeping or vacuuming
3. Add 2 to 5 cap-fulls Rejuvenata™ ACTIVE to a bucket of clean (preferably warm) water and stir for a few seconds. More soiled surfaces may need a higher concentration of Rejuvenata™ ACTIVE (1/5 of a bottle)
4. Mop the surface, rinsing the mop frequently. If the mixture in the bucket becomes too dirty, rinse the mop thoroughly in clean water and mix a fresh bucket of cleaner and water to continue mopping.
5. In light concentrations, the cleaner should not leave a residue after mopping. In higher concentrations the cleaner may leave a light residue, which should be mopped off with fresh water.
6. Rejuvenata™ ACTIVE is suitable for use in commercial scrubbing machines. When using a scrubbing machine, suitable abrasive pads should be used which will remove dirt easily but not scratch the particular surface.

Heavy duty cleaning:

General dos and don'ts:

1. Heavy duty cleaning is performed if the buildup of dirt and grime is too much for normal cleaning.
2. For indoor floors in homes this is easily avoided by regular light cleaning.
3. On commercial surfaces, due to high volume traffic, grime can build up despite daily light cleaning efforts.
4. Heavy duty 'Spring' cleaning can be performed every 3 months, monthly or more often if necessary provided a suitable cleaner and non-damaging tools are used.

Rejuvenata™ ACTIVE

Rejuvenata™ ACTIVE is an environmentally responsible, safe, natural enzyme cleaner which can be used for light regular cleaning, heavy duty cleaning or stain removal of dirt and grime, including stains caused by oil, mold, food and beverages.

1. TEST PRODUCT ON A SMALL AREA BEFORE FULL APPLICATION
2. Remove dust and dirt from surface by sweeping or vacuuming
3. Use 1/10 bottle of Rejuvenata™ ACTIVE per 1 gallon (about 4 liters) of fresh (preferably warm) water. The concentration can be increased further if necessary.
4. Generously apply the cleaning solution to the surface with a pump sprayer or mop and leave for a few minutes so the enzymes can start breaking down the dirt.
5. Before the cleaner dries on the surface, scrub with a suitable brush or deck scrubber. Rejuvenata™ ACTIVE is suitable for use in commercial scrubbing machines (recommended for large commercial surfaces).
6. Rinse thoroughly with clean water and a mop. A wet vac can be used for faster removal from commercial surfaces.
7. For stains or spots where normal heavy duty cleaning has not produced a perfect result, apply Rejuvenata Active™ neat, allow to sit for a few minutes, scrub with a suitable brush before it dries and rinse thoroughly. Repeat if necessary.
8. Please note: Rejuvenata™ ACTIVE is a cleaner for inanimate organic particulate such as dirt and grime and not a remover for mineral or rust deposits, although it can work on these in some circumstances. It is not recommended to use acidic cleaners on acid sensitive stones, including marble, limestone, travertine and onyx.



Stain Removal

There are 3 methods to remove stains from floors using Hanafinn products.

On surfaces treated with a Dry-Treat impregnating sealer, even if a substance has been left for too long on the surface and has started to leave stain, the mark should be lighter and not as deep as on an untreated floor.

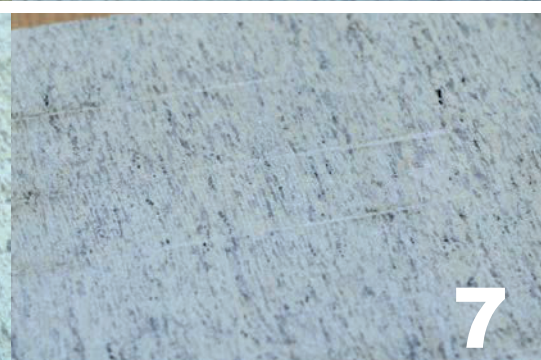
Rejuvenata™ ACTIVE Stain Removal

1. Apply undiluted Rejuvenata™ ACTIVE to the stains and leave it to work for at least 5 minutes.
2. Before the cleaner dries, scrub the area with a suitable brush or abrasive pad.
3. Wipe up the cleaner with absorbent paper towel or cloths and then rinse the remaining cleaner off thoroughly with a mop and fresh water.
4. Repeat as necessary

Stain Removal - Continued

Oxy-Klenza™ Open Poultice method

1. If you have any particularly difficult stains to remove, such as old oil stains, it is best to make an open (uncovered) poultice.
2. Mix plenty of Oxy-Klenza™ powder and a little water to make a thick paste.
3. Spread the paste thickly over the stain/s.
4. Leave the paste to break down the grime or stain for at least one hour (up to a day), sprinkling a little more powder and a little more water on it every 20 minutes or so to keep it moist and active.
5. Remove and dispose of as much of the paste as possible using a spatula, spoon etc,
6. Give the area a scrub with a stiff bristle brush. Rinse the area well with a mop, until all the cleaner residue and grime is removed.
7. Once the area is dry, if there is still some stain left, repeat the process.





Stone Showers

General recommendations

- An impregnating sealer is not a replacement for a waterproof membrane. Impregnating / penetrating sealers are breathable i.e. they do not block the pores and work by repelling water. Water will penetrate the pores under sufficient pressure or given sufficient time. Shower leaks should be properly repaired including repair or replacement of the waterproof membrane.
- Particular care should be taken with acid sensitive stones, such as marble, limestone and travertine in showers:
 1. Minerals in the water (hard water deposits) and soap scum invariably build up on shower surfaces. Removing mineral deposits usually requires use of an acid, which will damage acid sensitive stones.
 2. Using a non-acidic liquid soap will prevent the soap scum buildup you get from bar soap, and wiping down the stone after showering will limit hard water deposits.
 3. Soaps which are acidic for e.g. because they have citrus additives will also damage these stones and should be avoided. Hair dyes can also be acidic.
 4. Wiping the stone down weekly with a mild solution of Hanafinn Rejuvenata ACTIVE™ will aid cleaning and help to sanitize the surface.

Natural Stone Countertops

General recommendations

- **Spills should be wiped up as soon as possible**
Impregnating sealers work by repelling liquids rather than blocking the pores of the stone / concrete. The reason is so that air can still move through the pores allowing the material to 'breathe' naturally. It is the best technology available to protect against staining while preserving the look and natural integrity of your surface. Because the pores of your stone / concrete countertop remain open, the surface is not immune from staining, but the sealer will give you plenty of time to clean up liquids before they absorb into the pores and stain. Using coasters for drinks is also recommended.
- **Please note:** Impregnating sealers **will NOT prevent surface etching**. It is important to find out if your countertop is made from marble, limestone, onyx, travertine, or other acid sensitive materials. If so, it is important to wipe up spills from acidic substances (including citrus juice, vinegar, cola and wine) immediately, before acid etching occurs. Impregnating sealers repel water and oil but **DO NOT repel solvent based liquids, e.g. solvent based inks**.
- DO NOT leave **wet** trays, cutting boards, bowls, vases, and similar things on your surface. For example, the water underneath a wet plastic tray will evaporate very slowly, and if left for days or weeks might stain the surface.

Stain removal

Countertops are usually made from dense stones and a special sort of poultice is recommended which will allow the cleaner to penetrate the tiny pores, break down the stain and draw it out of the pores. Kitchen countertop stains are often oil stains, and old congealed / dried oil takes time to break down.

Regular Cleaning

For daily cleaning, we recommend that you use Hanafinn Rejuvenata™ Spray for countertops

Hanafinn Rejuvenata™ spray for countertops is a pH neutral cleaner specially designed for natural stone countertops. Rejuvenata™ is food safe, provides a mild, natural citrus scent, and contains a tiny amount of invisible sealer to increase protection. If you do not have a specialist cleaning product, warm water and a small amount of dishwashing detergent can be used.



Oxy-Klenza™ - closed poultice method:

- **You will need the following:**
 1. Hannafin Oxy-Klenza™
 2. Some squares of damp paper towel
 3. Plastic wrap
 4. A container or bowl to mix up an Oxy-Klenza™ paste
 5. A spatula or spoon for mixing and applying the paste
 6. A roll of removable painter's masking tape (the blue removable 3M tape is recommended as it is less likely to leave a glue stain).
 7. Clean cloths and plenty of fresh water

Method

If you have any particularly difficult stains to remove from a dense stone countertop, it is best to use a closed poultice.

1. Mix plenty of Oxy-Klenza™ powder and a little water to make a thick paste (moist, not wet).
2. Spread the paste thickly over the stain/s.
3. Cover the paste with a damp (not wet) square of paper towel.
4. Cover the paper towel with a square of plastic wrap, push it down so there is no air under the plastic and tape all four sides of the plastic square to the countertop so it is airtight.
5. Leave the poultice to work for 24 hours.
6. Remove the plastic and paper towel and dispose of as much of the paste as possible (using the spatula, spoon etc).
7. Rinse the area well with a cloth and plenty of fresh water until all of the cleaner residue is removed.
8. Once the area is dry, if there is still some staining left, repeat the process.
9. For more information, there is a video available on our YouTube channel (www.youtube.com/drytreat) on how to do a closed poultice.

Part 2: OUTDOOR SURFACES

Floors (Patios, Driveways, Pool Surrounds)

General recommendations for sealed porous surfaces with an impregnator

- Impregnating / penetrating sealers do not protect against physical wear or acid etching. Clean up acidic spills on acid sensitive materials like marble ASAP to minimize damage. Household items such as lemon juice, cola, wine and milk are acidic.
- Bird droppings and other animal excretions are usually acidic and can cause permanent etching to acid sensitive materials. It is recommended to clean these up as soon as possible.
- Wipe / mop up spills as soon as possible. Impregnating sealers are 'breathable' i.e. the pores of the surface remain open so moisture can escape by evaporation. They work by repelling water (hydrophobic) or oil and water (oleophobic) not by blocking the pores. If left long enough spills can penetrate and leave a stain.
- Regularly remove leaves, branches and other plant matter. Some types of leaves when left on a surface will bleed tannins over time, which can not only be difficult to remove but, being acidic, can etch acid sensitive stones such as limestone, travertine, and concrete.
- Cleaning up spills:
 1. First lift as much of the spill as possible with paper towel, a cloth or other absorbent material.
 2. Mop up the remaining spill with warm water. Adding Hanafinn Oxy-Klenza™, Rejuvenata™ ACTIVE enzyme cleaner or other suitable alkaline cleaner to the water should aid cleaning and help to neutralize the acid.
 3. If the spill has been left too long and has dried or caused a stain, refer to the section on stain removal.



Heavy duty cleaning:

General dos and don'ts:

- Heavy duty cleaning of outdoor residential areas is usually performed at least once a year after winter to remove mold stains and other buildups.
- For commercial outdoor surfaces, clean as required.

Oxy-Klenza™

Hanafinn Oxy-Klenza is an environmentally responsible safe oxygen and alkaline cleaner for removal of organic inanimate particulates, such as dirt and grime, including oil and mold stains.

1. Dissolve Oxy-Klenza in warm water (straight from the hot tap will activate the cleaner best). Mix 4 - 6 scoops of Oxy-Klenza in 2 gallons (about 8 liters) of water.
2. Mop plenty of the mixture onto the surface.
3. Leave for at least 15 minutes to give the cleaner time to break down grime and mold stains. Longer is better, but don't let it dry – so you may need to mop more cleaning solution onto the surface every 15 to 20 minutes.
4. Scrub lightly with edge of a stiff bristle brush or suitable non-scratch abrasive pad, to lift grime stuck in the surface texture.
5. On heavily soiled spots / stains apply a thick paste of Oxy-Klenza™ and water. Sprinkle a little more powder and a little more water to keep it moist and active approximately every 20 minutes. Remove and dispose of as much of the paste as possible before proceeding to scrub and rinse the floor.
6. Rinse with a mop and fresh water. It is important to lift the dirt off the surface, so keep changing the water in the mop bucket with fresh water and rinse the mop well.
7. If the surface is not adequately rinsed, you may notice white powder on the surface as it dries – these are minerals from the cleaner, and can be easily mopped or wiped off with fresh water.

Stain Removal

On surfaces treated with a Dry-Treat impregnating sealer, even if a substance has been left for too long on the surface and has started to leave stain, the mark should be lighter and not as deep as on an untreated floor.

There are 3 methods to remove stains from floors using Hanafinn™ products:

Oxy-Klenza™ Open Poultice method

1. If you have any particularly difficult stains to remove, such as old oil stains, it is best to make an open (uncovered) poultice.
2. Mix plenty of Oxy-Klenza™ powder and a little water to make a thick paste.
3. Spread the paste thickly over the stain/s.
4. Leave the paste to break down the grime or stain for at least one hour (up to a day), sprinkling a little more powder and a little more water on it every 20 minutes or so to keep it moist and active.
5. Remove and dispose of as much of the paste as possible using a spatula, spoon etc,
6. Give the area a scrub with a stiff bristle brush. Rinse the area well with a mop, until all the cleaner residue and grime is removed.
7. Once the area is dry, if there is still some stain left, repeat the process.



Walls and Cladding

General recommendations

- Sealing vertical surfaces with a permanent Dry-Treat impregnating sealer -- STAIN-PROOF™ -- will guard against contaminants soaking into the pores and leaving permanent stains. STAIN-PROOF™ will make cleaning easier and keep surfaces looking better in between cleanings.
- Softer, more porous materials in a freeze-thaw environment or near salt water can be treated with Dry-Treat 40SK to minimize spalling.

Heavy duty cleaning:

General dos and don'ts:

- Heavy duty cleaning is performed if the buildup of dirt and grime is too much for normal cleaning.
- In homes this is easily avoided by regular light cleaning.
- On commercial surfaces, regular cleaning of vertical walls may be impractical due to difficulty of reaching them.
- To clean large multi-story surfaces, pressure washing is the most effective method.

Oxy-Klenza™

Hanafinn Oxy-Klenza is an environmentally responsible safe oxygen and alkaline cleaner for removal of organic inanimate particulate such as dirt and grime, including oil and mold stains.

1. Dissolve Oxy-Klenza in warm water (straight from the hot tap will activate the cleaner best). Mix 4 - 6 scoops of Oxy-Klenza in 2 gallons (about 8 liters) of water.
2. Generously apply the mixture onto the surface.
3. Leave for at least 15 minutes to give the cleaner time to break down grime and mold stains. Longer is better, but don't let it dry – so you may need to spray more cleaning solution onto the surface every 15 to 20 minutes.
4. Use a pressure washer to rinse the cleaning solution. When using a pressure hose, run it over the surface. For softer surfaces use lower pressure or hold the nozzle further from the surface to avoid pitting.
5. If the surface is not adequately rinsed, you may notice white powder on the surface as it dries – these are minerals from the cleaner, and can be easily mopped or wiped off with fresh water.
6. **WARNING:** When applying Oxy-Klenza™, ensure that it does not come into contact with any metal material other than stainless steel. Oxy-Klenza is an oxidizer and will corrode metal. Avoid contact with door handles, gutter railings, window frames, etc.



Commercial Floor Buffer Machine:

A floor buffer machine is designed to clean surfaces including hard natural stone tiles and pavers. Rotary brushes pick up dirt from a surface, leaving a glossy, polished finish on the floor. The buffer machine consists of a handle which is connected to a horizontally rotating head. Beneath the head a large circular scrubbing pad is attached. The scrubbing pad spins in one direction and is usually electric, battery or propane powered. The type of power source will determine the maximum speed the pad can rotate and what cleaning process can be achieved. Some floor buffers contain a tank for solutions. Cleaning solution can be directly dispensed from the tank into the scrubbing pad and onto the floor. NOTE if Oxy-Klenza™ is being applied ensure that the solution tank is stainless steel or plastic as iron and other metals will be corroded by Oxy-Klenza™ because it is an oxidiser.



Low Speed Floor Buffer

Common Types of buffers:

- **Low Speed Floor Buffers:** are ideal for stripping, scrubbing and cleaning small to medium sized surface areas. These buffers are typically electric or battery powered.
- **High Speed Floor Buffers:** are ideal when a glossy 'wet look' for surfaces is desired. High speed buffers can be electric or battery or propane powered. This type of buffer can also be used as the final gloss buffing after a low speed buffer has been used to clean a surface initially.



High Speed Floor Buffers

Buffing Pads:

Two main types of buffing pads are:

- **Scrubbing pads:** when a floor has scratches or scuffmarks the surface area is uneven. To ensure an even polish on a floor, a more abrasive pad is needed to reach and polish the indents.
- **Polishing pads:** surfaces that have a smooth finish require a softer pad to polish the surface because there are no deep indents. Using an abrasive pad on a smooth surface is not advised as it can damage the stone.



Scrubbing Pad



Polishing Pad

Commercial Scrubbing Machine:

Commercial scrubbing machines are used for cleaning dust, grit and other materials from surfaces including natural stone tiles and pavers. Scrubbing machines can be automatic or manually operated. They are equipped with large brushes at the front, a solution tank and recovery tank (for waste water) and a water collection system at the rear (squeegee). The cleaning solution is dispensed as the floor scrubber moves forward. The squeegee at the rear of the machine collects the water and dirt into the recovery tank as the scrubber keeps moving. NOTE if Oxy-Klenza™ is being applied ensure that the solution tank is stainless steel or plastic as iron and other metals will be corroded by Oxy-Klenza™ because it is an oxidiser.



Automatic Scrubber

Common Types of Scrubbers:

- **Automatic (walk behind):** This type of scrubber is battery operated. The user stands behind the scrubber and uses a number of controls to operate the machine. The automatic scrubber is suited for cleaning small to medium sized surface areas due to its power and battery life. Automatic scrubbers are not very manoeuvrable so cleaning corners, obstructions or other tight spaces can be difficult.
- **Manual (ride on):** More powerful than automatic scrubbers, manual ride on's can be battery powered or fitted with a gasoline engine. This scrubber is ideal for cleaning large surface areas. The only limitation is its size, which could restrict cleaning corners, obstructions or other tight spaces.



Manual Ride-On Scrubber

Commercial Pressure Washers:

Pressure washers are designed to remove dirt, dust, mud, mold, grime and loose paint from a variety of surfaces including natural stone. The high pressure mechanical sprayer projects water from the hose at a high velocity. Pressure washers generally consist of a motor (electric or internal combustion), a high pressure hose and a trigger switch to operate the water. For softer surfaces, using a lower pressure washer or holding the nozzle further from the surface is advised to avoid pitting.

Common Types of Washers:

- **Electric:** This washer is best suited for cleaning small sized surface areas. This is because the washer needs to be connected to electric power supply via a cord which reduces mobility. The lower amount of pressure produced from an electric washer will also mean the time taken to clean a surface is longer than a gasoline powered washer.
- **Gasoline:** Gasoline powered washers are capable of producing high amounts of pressure. This type of washer is ideal for heavy duty cleaning. Gasoline powered washers should be used outdoors as the fumes emitted are not suitable for indoors.



Electric Pressure Washer



Gasoline-Powered Pressure Washer



Commercial Wet/Dry Vac

Commercial Wet/Dry Vac:

Wet vacuuming is used to scrub, strip or rinse a floor. After cleaning solution has been applied to a dirty surface, a wet/dry vac is used to pick the dirt and cleaning solution. Instead of a filter bag, the inside of the vacuum contains a bucket which collects the dirt and water. A fan above the bucket, attached to an electric motor enabled the suction from the intake port, similar to a conventional vacuum cleaner. The machine is suited for heavy duty cleaning. Wheels are usually fitted to the base of a wet/dry vac which improves manoeuvrability in tight spaces.



Common Problems with Porous Surfaces

Efflorescence:

If the surface has been sealed genuine Dry-Treat impregnator, there should be very little, if any occurrence of efflorescence. Efflorescence are minerals which are dissolved in water which moves up from the substrate - these dissolvable minerals can come from the mortar bed, grout or even the soil or stone itself, and are deposited as white or slightly yellow powdery deposits on the surface. Efflorescence is best removed when it appears and before it cures and hardens - if tackled within a few weeks of occurring, it can usually be removed using a dry, stiff natural bristle or wire brush. If efflorescence cures and hardens, an acid, usually phosphoric acid (this is milder and less dangerous than hydrochloric (muriatic) acid. Many materials, however, including marble, limestone and travertine are acid sensitive and will be badly etched by strong acids - another reason why efflorescence is best tackled before it cures.



Hard water deposits:

Minerals in our water supply can be left on the surface, and is often mistaken for efflorescence. If you have 'hard' water in your area (water which contains a high content of calcium, magnesium or other mineral salts, this will leave mineral deposits when you use your tap water to clean the surface. As with efflorescence, these mineral deposits are best tackled immediately and brushed away using a dry deck scrubber or stiff broom before they harden and stick to the surface with exposure to air and humidity. Once mineral deposits harden, as with efflorescence, an industrial acid (usually phosphoric) is usually best to remove it, which is a problem with acid sensitive materials such as marble, limestone and travertine.

Rust marks:

Rust marks usually happen from metal patio furniture and, like efflorescence, can be very difficult and sometimes impossible to fully remove. As with efflorescence, an acid (often a mix of phosphoric and oxalic acid) is usually the most effective way to remove rust. This is not recommended for acid sensitive stones like marble, limestone and travertine.

Acid etching:

When an acidic liquid such as lemon, coffee or cola comes into contact with an acid sensitive material it dissolves the calcium or lime in that material, leaving physical damage called etching.

Materials that are acid sensitive include:

- Limestone
- Marble
- Onyx
- Travertine
- Concrete

Dry-Treat's impregnator sealers will not prevent acid etching. This is because the sealer does not prevent a liquid from touching the surface. When anything acidic touches an acid-sensitive surface, it will dissolve any calcium content, leaving a rough, dull etch mark.

The only way to prevent acid etching is to have a physical barrier such as a coating that stops an acidic substance from making contact with the surface. Dry-Treat's Vitremela is an acid-proof coating which will prevent acidic substances from touching the surface of a material without changing its look.