

3.2 Removal Techniques

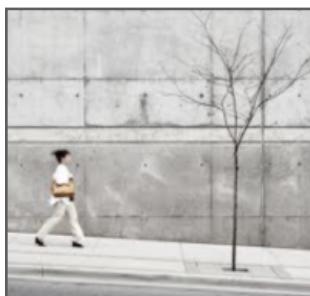
The following materials will be outlined as to what they are, followed by how to remove graffiti from them effectively. Always let the product dwell until the graffiti starts to release.

Cement is a binder, a substance that sets and hardens independently, and can bind other materials together. It is used in the production of mortar and concrete. Concrete should not be confused with cement, because the term cement refers to the material used to bind the aggregate materials of concrete.

CONCRETE

Concrete is a composite construction material composed primarily of aggregate, cement, and water. The properties of the cement vary depending on the formula used to make it. The aggregate is generally coarse gravel or crushed rocks such as limestone, or granite, along with a fine aggregate such as sand. The cement serves as a binder for the aggregate.

The porosity of concrete varies greatly. The most important source of porosity in concrete is the ratio of water to cement in the mix. As the water to cement ratio increases, the porosity of the cement paste in the concrete also increases. As the porosity increases, the compressive strength of the concrete will decrease; therefore, no two concretes will have the same porosity and exact same Graffiti Syrup dwell time.



Removal Classification: Porous Removal

Product: GRAFFITI SYRUP 

REMOVAL PROCEDURE: Agitate Graffiti Syrup into graffiti with a brush and let sit for 5-30 minutes. Dwell time will depend on a number of factors, such as graffiti paint type (some paint colour binders or brands release easier than others), substrate type, and outside temperature.

Be careful not to let products dry onto surfaces; if they do, you may need to fully reapply Graffiti Syrup.

Once the paint is moving when you touch a sample area with your brush, agitate the paint again if needed and let it sit a bit longer before starting the pressure washer. Pressure wash off with low-pressure and high heat while controlling where the product will go once it is off the wall.

Rinse entire wall area until the water runs off the surface clear.

This surface is very sensitive to pressure washing damage, so lower pressure with high volume and heat is the starting point on all removals.

BRICK

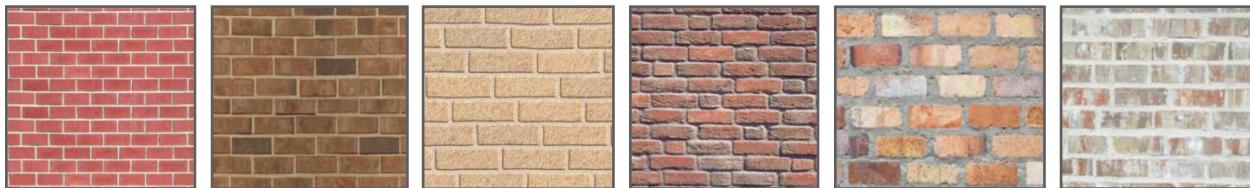
Brick is one of the more popular substrates that you will remove graffiti from. It has been used around the world for centuries and still continues to be widely used because of its durability, insulation properties (sound, temperature, fire), and flexibility to work with.

Bricks have a wide range of differences in them even though they all look fairly similar. Besides the obvious size differences, brick colour and textures change with how they are made and what they are made of. When a brick is made it is placed in a kiln where the atmosphere in the kiln applies pressures while it is being fired. A slight change in some key ingredients will change the colour and capillaries within the brick during this process. This makes brick a great building tool, but unique substrate to remove graffiti from.

Bricks have a range of porosity, which can be great for temperature regulation, environment protection, and maintenance purposes, but can also make it difficult to know what to expect when removing graffiti from it. Fortunately, the experience Remove My Graffiti has in this field will make this much easier as there are a few simple guidelines to follow when assessing whether or not a job will take 10 minutes or 45 minutes.

The darker the brick, the easier graffiti will come off of it (this doesn't include mortar, which will be covered below, but is more predictable across the board and is seldom harder to remove from than any brick). Bricks that have a medium or light colour will hold the pigment deeper in their pores, so they can require 2 or 3 applications. The second and third application would only require product on visible areas, so product usage is about 75% lower than what the first application required.

Older bricks are less dense and are easy to remove graffiti from because they don't absorb pigment like newer lighter coloured ones do. The mortar and brittleness is very important to be careful of as they can flake and chip easily.



When removing paint from brick always start with the lowest pressure possible and slowly build up to what is required to remove only the graffiti. Even new dark bricks can be etched (permanently damaged) with your pressure washer.

Removal Classification: Porous Removal

Product: GRAFFITI SYRUP 

REMOVAL PROCEDURE: Agitate Graffiti Syrup into graffiti with bristled brush or paint brush and let sit for 5-30 minutes. Make sure to apply in the grout lines as well. Dwell time will depend on a number of factors, such as paint type (some paint colours' binders release easier than others), brick type, and outside temperature (heat will accelerate the dwell time needed). Be careful not to let product dry onto surfaces.

Once the paint is moving when you touch a sample area with your brush, agitate the paint again if needed and then start the pressure washer. Pressure wash off with low to medium pressure to start and high heat on your pressure washer.

Hit the graffiti with different angles of water because there are many sides to the pores that can hold paint. Control where the product will go once it is off the wall.

Rinse entire wall area until the water running off the surface is clear.

GLASS

Glass is a very common non-porous surface. Usually glass is very easy to clean unless acid etching or scratch has permanently damaged it. In these 2 cases, glass replacement is the solution. Buffing it out with special machines is another option, but it will slightly change the structure of the glass and due to the cost associated with it, it is only suggested on large or expensive pieces of glass.

One major caution when dealing with glass is to always check to see if it has been tinted or if there has been a security film applied to the surface that you are cleaning. Security films are normally applied to the inside of the glass, but there is the occasional time where it will be applied to the outside of the glass. If a window is smashed, the security film will keep the glass fragments together on the surface of the film and within the frame. Certain removal techniques can damage a tint or a security film so be sure that there is no film on the outside of glass prior to using a product on it. A small test patch is always a good idea.



Removal Classification: Soft Removal (Non-Porous Surface)

Product: VAMOOSE 

REMOVAL PROCEDURE: Start with a small sample scratch in a bottom corner to see if there is a film on the glass. If not, use a straight edge blade to scrape the paint off. Once finished or if it didn't get it off, apply Vamoose and lightly agitate the product in. Do not let dry. Spray

with water and wipe window clean. Repeated steps with the water may be necessary to prevent any streaks of product left behind.

GRANITE

Granite is a very hard, granular, crystalline, intrusive igneous rock consisting mainly of quartz, mica, and feldspar. It is relatively non-porous due to the interlocking nature of the crystallized minerals which it contains. Granite can chip easily, so be careful with bumping into it with tools.



Removal Classification: Soft Removal or Porous Removal

Product: **VAMOOSE** **BEAVER BITE** **GRAFFITI SYRUP**

REMOVAL PROCEDURE: Depending on the type of paint and granite, any product can be used. Starting with Vamoose, apply and lightly agitate it in. Do not let dry. Spray with water if needed and wipe clean. If this didn't work, repeat steps with Beaver Bite and later Graffiti Syrup if needed, but note that less dwell time is most likely required due to the low porosity of the material.

MARBLE

Marble is a metamorphic rock composed of re-crystallized carbonate minerals, most commonly calcite or dolomite. It is generally polished (white or coloured) and used in fine building work or decorative art. It is somewhat porous and can be easily stained. It is slightly more porous than granite but can often be treated as a non-porous substrate when cleaning.



Removal Classification: Soft Removal or Porous Removal

Product: **VAMOOSE** **BEAVER BITE** **GRAFFITI SYRUP**

REMOVAL PROCEDURE: Remove the same as you would on granite. Soft products will remove graffiti from these surfaces 95% of the time; so try to avoid using a more aggressive product unless needed.

METAL

There are many different kinds of metal; steel, stainless, aluminum, galvanized, brass, copper, anodized aluminum, zinc, etc. Most metals are easy to remove graffiti from and are very durable. Metal can be scratched if improper removal techniques are used, so be careful and always do a sample test first.



Removal Classification: Soft Removal

Product: **VAMOOSE** **BEAVER BITE**

REMOVAL PROCEDURE: Spray Vamoose first on graffiti and lightly agitate with a gentle scouring pad until graffiti is removed. Do not let dwell for a long time, unless it is bare metal. Factory painted or vinyl sticker surfaces can be damaged very easily, so be ready to wipe off product if you notice any type of damage starting. If Vamoose isn't working as strong as you need it to, wipe it off and apply Beaver Bite with the same procedures.

Sometimes being strategic on what to remove and what to leave behind is the only option. For example, the NO PARKING sign was hit with a marker and the red circle looks like it will wipe off. The whole sign would end up white, so edge in and clean the white part of the sign only and leave it on the portion that could also wipe off. Only from up close will it look like missed graffiti removal. If the alternative to graffiti removal is going to be to replace a decal, do what you can to make it look good without going to that step. Unless it is in a quote, do not replace decals for clients unless they can provide the decal and it is agreed upon first.

When removing from galvanized metal, use Vamoose only and do a sample first. The finish on galvanized metals can easily wear down, so the exposed metal (outside edges of the graffiti) can become shiny if it has a scouring pad rubs on it, while the area that the graffiti covered can look like the original galvanized metal. This area was protected by the paint and hasn't been scrubbed off. Once the paint is off you wouldn't keep rubbing off the galvanized finish. Take your time and try to only scour the area that has graffiti. Don't overlap your scouring strokes onto the metal.

These removals can be very difficult, so talk to the property owner/manager first about the difficulty of this particular job. Galvanized metal can be similar to working on a painted surface in the way that it has a coating, so you're trying to remove 1 layer, but not the other.



MORTAR

Mortar is the paste used to bind many different types of construction blocks and fill the gaps between them. The mortar becomes hard when it sets, which results in a rigid aggregate structure. Its composition is often composed of a mixture of sand, a binder (such as cement or lime), and water. Mortar can be very fragile, especially on older buildings. Since bricks are porous and absorb water, older buildings that were built without the correct ratios of water in the mortar may have absorbed the water out of the mortar too quickly, thus creating a weaker mortar. Newer buildings don't seem to have these issues, so always use low pressure on older buildings and constantly watch for mortar to be chipped or disintegrate as you are working.



When removing graffiti it is very important to not hit the mortar directly with high pressure as it is a softer material than the brick.

Removal Classification: Porous Removal

Product: GRAFFITI SYRUP 

REMOVAL PROCEDURE: Treat this removal the same as any other brick, but note that it doesn't generally need high pressure. As long as the product has been on mortar for the correct amount of time, it will come off easier than the brick it is holding together. If graffiti is difficult to remove, you should be prolonging the dwell time. Let the product do the hard work.

ROCK

Graffiti will often be found on rocks. These vary in porosity, but are normally less porous than masonry products and are usually pretty easy to remove graffiti from.



Removal Classification: Porous Removal

Product: GRAFFITI SYRUP 

REMOVAL PROCEDURE: Remove the same way you would with brick, but because rock is much less porous and durable you will often need less product dwell time, can use higher heat and pressure, and can expect the best results. Because rock is so old and weathered, pressure washing the rest of it is a good idea. It will hide the fact that graffiti was even there along with leaving an aesthetically better piece of work behind. Hyper cleaning any section of a job and leaving the rest behind is never a good idea. Leave every job-site looking like graffiti was never even there, but even better, make it look like you were never there too.

SANDSTONE

Most sandstone is composed of quartz and/or feldspar. It can be any colour, but the most common colours are tan, brown, yellow, red, grey, pink, white, and black. There are minerals within the sandstone that cements the grains together. Sandstone cements can influence the durability, colour, porosity and usefulness of the stone. Generally sandstone is very porous for being a rock and will have porous properties.



Removal Classification: Porous Removal

Product: BEAVER BITE GRAFFITI SYRUP

REMOVAL PROCEDURE: Graffiti removal process is the same as brick, but use a lot less pressure and be aware that product can dry quickly.

STUCCO

Stucco is a material composed of an aggregate, a binder, and water. It is applied wet and hardens to a very dense solid. It is used as an exterior cement plaster wall covering and is usually a mix of sand, cement, lime and water but may also consist of a proprietary mix of additives including fibres and synthetic acrylics that add strength and flexibility. The first layer of plaster is called a “scratch coat”, consisting of plastic cement and sand. The second layer is called the “brown coat” or levelling coat. It also consists of sand, cement, and lime. The final exterior layer is the “finish coat” of which there are two common types. The first is a Colour Coat that is a mixture of coloured sand, cement, and lime. This is available in a variety of colours. The second is an Acrylic Finish that is an acrylic-based finish from 1 to 4 mm thick. It can be ordered in any colour.



Removal Classification: Porous Removal or Paint

Product: GRAFFITI SYRUP or Colour Matched Paint

REMOVAL PROCEDURE: If removing the graffiti, you should have a variable pressure wand. Too much pressure can blast off the stucco and leave it damaged very easily. For this reason, if there is any colour in the stucco (it's not grey), we typically suggest you consider painting it. If you're going to paint a wall, then it won't matter if you don't successfully remove the graffiti, so attempting it is a good first choice no matter what might happen.

To begin painting, you'll need a sample that your local paint shop can use a spectrometer on. You may have to chip off a piece of the building or find something that can be detached for the paint store to use. After getting a sample (approximately the size of a quarter or larger) and having a spectrometer colour match it, paint the surface to the nearest edge of the surface that will give a result in the lowest visual change of surface. For example, if a wall is 20 feet high, but has some kind of dasher or seam in the wall, paint up to that level and that same height laterally. Bleeding/fading when painting is the last resort even if it is a perfect match because over time the colours will fade differently, which will then contrast and/or come across as a bad match over time.

SYNTHETICS

A synthetic or semi-synthetic product is any product that was molded into the shape it is. Graffiti on plastic/synthetic benches, playground features, or newspaper stands are all very common. Smooth plastic is very simple to remove from whereas rough plastic can be more challenging. The rough plastic has many pits and grooves where the paint or ink sits. These can require more work with steel wool or scouring pad to remove the graffiti 100%. Even if the product touches the graffiti, it still needs to be agitated and wiped clean.



Removal Classification: Soft Removal or Porous Removal

Product: VAMOOSE

BEAVER BITE

GRAFFITI SYRUP

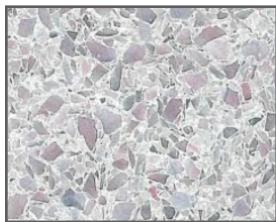
REMOVAL PROCEDURE: The process is the same as brick, but start with less pressure and build up if Beaver Bite doesn't release enough of the graffiti. Be aware that product can dry quickly as each material may have its own unique features. Repeating the process is the only way to get graffiti off. This is the hardest surface to remove from because of how absorbent the materials can be with felt markers.

Beaver Bite is a great product to use first with steel wool, but do a test patch to make sure the synthetic material doesn't get scratched by it. If it does, then use a soft scouring pad instead. Graffiti Syrup is the last option, but it does have the longest dwell time because of the clinging power it has with its thicker viscosity. Every synthetic material is different, so some trials of the products from Vamoose up to Graffiti Syrup is your best plan. Always rinse the area afterwards with water.

TERRAZZO

Terrazzo is a composite material poured in place or precast, which is used for floor and wall treatments. It consists of marble, quartz, granite, glass or other suitable (often recycled) chips, sprinkled or un-sprinkled, and poured with a binder that is cementitious, chemical, or a combination of both. Terrazzo is cured, ground and polished to a smooth surface, or otherwise finished to produce a uniformly textured surface. It is environmentally friendly, durable, and low maintenance. It will typically last the entire life of a building.

Although Terrazzo may not look porous, it is. The porosity is very low and may act like a non-porous substrate when cleaning. Always do a test sample first when working with terrazzo. Caution should be used as some terrazzo could look cloudy afterwards or have the finish damaged. Always do a small test patch before working on the main job.



Removal Classification: Soft Removal or Porous Removal

Product: **VAMOOSE**

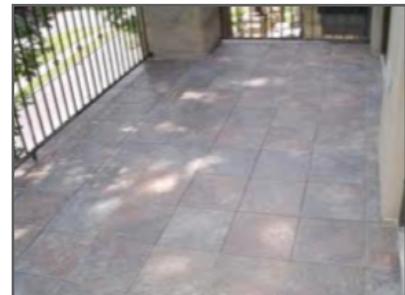
BEAVER BITE

GRAFFITI SYRUP

REMOVAL PROCEDURE: Remove graffiti the same as you would from granite. Start with Vamoose and if it doesn't release all of the graffiti, work up to Beaver Bite, and then Graffiti Syrup. You can use a pressure washer with Beaver Bite, so Graffiti Syrup might not be required. The heat and pressure may clean up the areas that agitating isn't able to reach.

TILE

A tile can be made up of many different materials, such as ceramic, stone, metal or even glass. By its very nature, tile is usually porous; however, a glaze will usually be applied and then the tile will be fired, which makes it essentially non-porous. You may encounter some tiles that have not been glazed or fired and that need to be treated as a porous material. Always do a test before proceeding.



Removal Classification: Soft Removal

Product: VAMOOSE BEAVER BITE

REMOVAL PROCEDURE: Due to the variety of tiles available, assessing what the tile surface is most similar to is the first step. Some will be closer to glass and others like sandstone. Use the according removal techniques with erring on the side of caution and moving up from there. When using Beaver Bite you can use a pressure washer to get deep into any pores that the tile might have. Always use less pressure than you normally would with any corresponding surface when tiles are involved because of their typically weaker adhesion to the building. Also be careful with the grout between the tiles as it will be softer than the tile and get damaged quickly if you are using a pressure washer.

VINYL

Vinyl is a type of plastic that is extremely common, but comes in many shapes and textures. The most common forms of vinyl that we remove graffiti from is vinyl siding and vinyl signs.

Vinyl siding is plastic exterior cladding for a house. Most vinyl siding is a non-porous material and is relatively easy to remove graffiti from. Like other plastics the vinyl siding will often have a texture to it, which acts as pits and pores that the paint or ink likes to sit in. This can make the removal process a little time consuming. Great care must be taken as to not scrub the vinyl too much as to remove the original colour of the siding. If needed, vinyl siding can be painted but only with a top quality acrylic latex paint that will provide the adhesion it needs.

Vinyl signs/awnings can be a little more difficult to clean. They tend to be flexible in their make-up and act as though they are porous. They are very susceptible to staining, so graffiti can become permanent with some graffiti products, which is similar to the process as to how they get their colour.



Removal Classification: Soft Removal

Product: VAMOOSE BEAVER BITE

REMOVAL PROCEDURE: Use the same procedures as you would with synthetic materials, but watch dwell time after agitating. Spreading the product around once it has started to move the graffiti can make it spread and soak into the vinyl, which can leave a patch of the colour you're removing in the shape of your agitated area. Try getting the product straight on to the graffiti without agitating and let it dwell for a while first. Do a small test area on vinyl first to see how long you have before the colour of the vinyl will start to come off. Typically you will have less than 15 seconds to apply product, agitate, and wipe off on vinyl.

This is one of the hardest surfaces to remove from because the colour isn't much different than the graffiti itself. Products cannot determine what is graffiti and what isn't; therefore, all of it can come off. These also cannot be painted, so if you can't get it right away, don't keep trying. A small amount of graffiti is better left, with a colour matched vinyl patch/decal applied over top of it, than leaving a large white scrubbed area behind. There would be a white area left behind because awning materials normally start off white and have colour applied. Graffiti removal products cannot determine what is suppose to stay and what is graffiti. If someone doing graffiti saw that there was an obvious graffiti removal attempt that ended up damaging the awning (removing the awning colour), then it will most likely become a target for more graffiti.

WOOD

Wood is a less common substrate that sees graffiti, but it does happen from time to time. Some examples include wooden fences, picnic tables, wood siding, and even living trees. Wood is a porous substrate and varies in porosity depending on how dense the wood is. Soft woods without a finish on them can be the most absorbent material you'll come across, and some will be similar to a dense concrete product. The more dense the wood the less porous it is.



Removal Classification: Soft Removal or Porous Removal

Product: **VAMOOSE**

BEAVER BITE

GRAFFITI SYRUP

REMOVAL PROCEDURE: If a surface was stained or painted, colour matching and applying the same finish is the procedure to use. If it is raw wood, such as a picnic table, the options are limiting because of how deep the product can be soaked in. Using Beaver Bite or Graffiti Syrup can be used, but the process and the possible outcomes should first be discussed with the owner.

If you are to use a product, use a short dwell time, and very low pressure with warm water only (not hot water). Pushing water into wood is never a good for the wood, let alone hot water. The pores and texture of the wood can be damaged forever, so sanding afterwards will most likely be needed. This can be discussed with your sales department, which most likely has already been addressed in the quoting procedure. The wood would have to dry for a few days before sanding could be done. Very light sanding is all that should be needed.

If a tree has been hit, you can apply product to it, but be sure to use a quick dwell time, warm/cool water, and very low pressure. Damaging a tree to have it graffiti free is worse than letting it live with graffiti on it. Fortunately, raw wood is a very uncommon item to be hit.

Painting or staining is the last option, but a good option in most cases. Raw wood doesn't last very long in the outdoor elements, so it should have a coating of something on it anyways to protect it. Refer to the Module 3.3 before proceeding.

* EFFLORESCENCE *

Efflorescence is not necessarily a type of graffiti; however, it is something that occurs on substrates such as brick and concrete and you may get asked about it occasionally, so you should know what it is.

Efflorescence can occur on porous construction and is usually only a cosmetic problem, but it can sometimes indicate serious structural weakness. It often occurs on masonry construction, particularly brick, and is when water moves through the wall or other structure and brings the salts to the surface. As the water evaporates it leaves the salt behind which forms a white, fluffy deposit that is called efflorescence.

There are products that can be used to remove it, but they do not guarantee that it will not come back once moisture hits the wall again. To effectively remove efflorescence you must use a wash on the wall to remove it and then seal the surface with a concrete sealer.



* STICKERS *

Slap tags are extremely common, so knowing how to remove them quickly and effectively is important. A straight razor blade in a holder is the best way unless the slap tag is on a soft surface than can be easily scratched, such as a synthetic material like playground features or benches.

To remove any type of sticker from hard surfaces you just need to get your blade under one end and slowly peel it off. Once it is off you may need Vamoose to clean up the residue left behind. Use Vamoose like you would on any other graffiti removal.



Soft surfaces, which could get scratched if a blade is used, need water to make the paper portion of the sticker disintegrate like most paper does in water. Finish with Vamoose for the residue once you can roll the paper off with your hands. This can take slightly more time than using a straight blade, but this water method can also be used on hard surfaces too if you don't have a straight blade in your tool box.

Shadows & Ghosting



There may be instances where some shadowing may occur (above photo). This is extremely rare with Remove My Graffiti products and can often be prevented by using the proper techniques outlined in this manual.

Shadowing or Ghosting results when part of the pigment and binder remain on the masonry surface, or penetrate into the masonry to varying depths depending on a number of factors, including the surface tension of the substrate and viscosity of the solvent. When Remove My Graffiti products are used properly they will rarely leave any pigment or binder behind. If you don't remove it all with the first attempt, a second attempt will almost always get what's left behind.