







Innovative Solutions for the Construction Industry

Easy-to-Use Premium Quality Contractor Grade Products Formulated Especially for New & Existing Concrete, Pavers, Brick, Retaining Walls, Masonry, Manufactured and Natural Stone Surfaces.

"Our commitment to our customers is to create the best possible products using only the finest raw materials available."

- Jim Glessner, President

Global Sealer Technologies is a leader in the development and manufacture of innovative and advanced chemical products for the enhancement, protection and maintenance of all concrete, masonry and natural stone surfaces.

Our professional staff has a combined industry experience of over 100 years, from laboratory design to field application.

We continue to provide the marketplace with cost effective solutions for the construction industry, as well as for maintenance and restoration, with unparalleled knowledge and technical support.

Global Sealer Technologies is dedicated to serving our customers' needs through education and the development of the latest technologies for the advancement of our product lines.

www.gstinternational.com



Our Family of Products:

Where Efflorescence, Rust or Cement Scale is Present

Use **Clean Concrete** to remove efflorescence, rust and cement staining.

Where Cleaning is Needed or Clean Concrete Has Been Used

Use **Pro-Grade Cleaner** to thoroughly clean, remove oil, grease, dirt and prepare the surface prior to applying any of the GST Sealers.

Use **Pro-Grade Cleaner** to neutralize pH where **Clean Concrete** was used.

Where a Heavy Duty Concrete and Masonry Degreaser is Required

Degreaser Pro is a concentrated heavy duty concrete and masonry degreaser specifically designed to clean deep seated oil and grease stains, chewing gum residue and organic stains on all hardscape surfaces.



Choose an Invisible or Appearance Enhancing Sealer

To be applied after the surface is clean and dry.

Choose an Appearance Enhancing Sealer: Invisible Sealer:

- Low Sheen Wet Look Lacquer Stain Block Elite
- High Gloss Wet Look Lacquer
- Lock 'N Seal
- Satin Seal
- Final Coat



High Gloss Wet Look Lacquer



Our solvent-based, high gloss, crystal clear, deep penetrating sealer is designed for decorative concrete, paving stone and natural stone surfaces, to enhance and beautify their natural color.

- Easily applied, fast drying, long lasting
- Interior and exterior use
- Inhibits efflorescence
- Gas, oil and grease resistant
- Water repellent
- Non-yellowing and UV resistant
- 85-90% color densification

NOTE:

- Meets or exceeds Federal EPA standards for VOC compliance.
- Meets or exceeds South Coast Air Quality
 Management District and the Bay Area Air Quality
 Management District, for VOC compliance of less
 than 100g/l required by the State of California.



GST International's High Gloss Wet Look Lacquer is a solvent-based, high gloss, crystal clear, deep penetrating barrier coating for decorative concrete, stone, natural and manufactured hardscape surfaces. *High Gloss Wet Look Lacquer* provides a 'water-wet' appearance which enhances and beautifies the natural color of the applied masonry surface. Non yellowing *High Gloss Wet Look Lacquer* seals against food stains, gasoline, grease, oils, water and acid. Its deep bonding formula resists peeling, chipping, cracking and UV degradation.

Made from the latest developments in solvent-based acrylic chemistry, *High Gloss Wet Look Lacquer* delivers excellent resistance to the formation of efflorescence. When used on newly placed concrete, the sealer will help protect against spalling, dusting, freeze-thaw damage and alkali degradation. *High Gloss Wet Look Lacquer* remains hard even under extreme sunlight and delivers superior wear resistance. Its VOC compliant formula works great indoors and outdoors to provide a breathable barrier that allows moisture to escape from the coated surfaces. Also, it is effective as a joint sand stabilizer for interlocking pavers.

Low Sheen Wet Look Lacquer



Our solvent-based, low sheen, crystal clear, deep penetrating sealer is designed for decorative concrete, paving stone and natural stone surfaces, to enhance and beautify their natural color.

- Easily applied, fast drying, long lasting
- Interior and exterior use
- Inhibits efflorescence
- Gas, oil and grease resistant
- Water repellent
- Non-yellowing and UV resistant
- 80-85% color densification

NOTE:

- Meets or exceeds Federal EPA standards for VOC compliance.
- Meets or exceeds South Coast Air Quality
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 than 100g/l required by the State of California.



Low Sheen Wet Look Lacquer is a solvent-based, low sheen, crystal clear, deep penetrating barrier coating for decorative concrete, stone, natural and manufactured hardscape surfaces. *Low Sheen Wet Look Lacquer* provides a 'wet-damp' appearance which enhances and beautifies the natural color of the applied surface. Non-yellowing *Low Sheen Wet Look Lacquer* seals against food stains, gasoline, grease, oils, water and acid. Its deep bonding formula resists peeling, chipping, cracking and UV degradation.

Made from the latest developments in solvent-based acrylic chemistry, *Low Sheen Wet Look Lacquer* delivers excellent resistance to the formation of efflorescence. When used on newly placed cured concrete, the sealer will help protect against spalling, dusting, freeze-thaw damage and alkali degradation. *Low Sheen Wet Look Lacquer* remains hard even under extreme sunlight and delivers superior wear resistance. Its VOC compliant formula works great indoors and outdoors to provide a breathable barrier that allows moisture to escape from the coated surfaces. Also, it is effective as a joint sand stabilizer for interlocking pavers.

Lock'N Seal



Lock 'N Seal is a one step waterbased, UV resistant sealer and joint sand stabilizer designed specifically for interlocking paving stone installations.

- Bonds and locks down joint sand
- Retards efflorescence
- Prevents ant tunneling
- Repels oil, grease and rust stains
- Inhibits weeds and grass between pavers
- Non- yellowing and UV resistant
- Easily applied, fast drying and long lasting
- Interior and exterior use
- Eases maintenance
- Re-coatable
- 25-35% color densification

NOTE:

- Meets or exceeds Federal EPA standards for VOC compliance.
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Lock 'N Seal is a one-step sealer and joint sand stabilizer. It is formulated from the latest developments in non-hazardous VOC, EPA and OSHA compliant, solvent free, water-based UV resistant acrylic chemistry designed specifically with high product solids to create the ultimate sealer for interlocking paver installations. It seals and locks down the sand within the paving joints with a flexible bond that reduces weed growth and ant mines. **Lock 'N Seal** should NOT be used in conjunction with polymeric sand. Please choose one of our other fine sealers.

Lock 'N Seal gives superior protection against stains and has exceptional water resistance. It will resist most stains up to 24 hours, however, oils and especially solvents should be wiped up soon after spillage has occurred. Lock 'N Seal enhances, brightens and beautifies the natural beauty and color of the pavers while improving their durability and resistance to fading. Once the surface has been properly prepped, cleaned and dried (24-48 hours), Lock 'N Seal can be applied immediately.

Stain Block Elite



Stain Block Elite is a state-of-the-art penetrating sealer that is equally effective on porous and dense surfaces such as concrete, natural stone and masonry.

- Water-based, solvent free and low odor
- Excellent penetration, long lasting
- Interior and exterior use
- Repels gas, oil and grease
- No change to surface appearance
- Silicone free, re-coatable
- Easy application and fast drying
- Water and stain resistant
- 3-5% color densification

NOTE:

- Meets or exceeds Federal EPA standards for VOC compliance.
- Meets or exceeds South Coast Air Quality
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Stain Block Elite is a state of the art, water and stain resistant, penetrating fluoropolymer impregnating sealer. It has been specifically designed for porous to dense concrete, brick, natural and manufactured stone surfaces. When dry it is virtually invisible, leaving the surface with its original appearance and breathability. It resists oil and grease stains, rust stains, moss, mildew and spalling problems associated with freeze/thaw cycles. **Stain Block Elite** provides superior protection against moisture penetration, thereby reducing the formation of efflorescence.

Stain Block Elite chemically bonds with the silicates present in the surface, forming an insoluble barrier that will not fade, yellow, crack or peel. It is highly alkaline resistant and designed for use on dense surfaces such as: marble, granite, limestone, travertine, polished or tumbled stones, concrete, brick, pavers, slate, precast concrete, tile and manufactured and natural stone. It is easy to apply and fast drying. Commonly used in both commercial and residential applications, i.e.: dining, food preparation and serving areas.

Satin Seal



Satin Seal is a state-of-the-art water-based acrylic sealer with a satin sheen finish designed to enhance the natural colors of the applied surface.

- Inhibits efflorescence
- Water-based solvent free and low odor
- Interior and exterior use
- Oil and stain resistant
- Excellent adhesion
- Water repellent
- Non yellowing and UV resistant
- Easily applied, fast drying and long lasting
- Re-coatable
- 20-25% color densification

NOTE:

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Satin Seal is formulated from current state-of-the-art water-based ultra violet resistant acrylic coatings technology. Designed as a film forming acrylic sealer, *Satin Seal* creates a non-yellowing barrier coating that seals and protects concrete, exposed aggregate, natural stone, slate, stamped and colored concrete against food stains, grease, oils, rust and water, while enhancing the natural colors of the applied surface whether indoors or out.

When used on surfaces like concrete pavers, *Satin Seal* penetrates deeply, providing long-term protective service. For all unsealed surfaces, it makes a perfect base coat prior to the application of *GST Final Coat*, buffable floor polish and wear coat. *Satin Seal* will resist most stains for 24 hours, however, oils and especially solvents should be wiped up soon after spillage has occurred.

Final Coat



Final Coat is the premier high solids acrylic polymer floor polish for gloss and durability. Its high solids formulation provides maximum scuff and heel mark resistant gloss for lower maintenance costs.

- Easily applied, fast drying, long lasting
- High solids, high gloss
- Long lasting, non-yellowing
- Buffable, wet or dry
- Heel mark resistant
- Slip and scuff resistant
- Reduces maintenance costs

NOTE:

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Final Coat is a premier high solids acrylic polymer floor polish for gloss and durability. It represents the first major improvement in concrete floor care technology in years. As a wear coat, its high solids formulation provides maximum scuff and heel mark resistance, for a gloss finish resulting in lower maintenance costs. *Final Coat* requires fewer coats than are needed with conventional lower solids products and stays glossy even after numerous scrubs. It has the advantage for a wide spectrum of maintenance programs, from low speed wet spray buffing and frequent ultra-high-speed burnishing to 'walk-away' application maintenance programs.

Uniquely formulated for exceptionally severe high traffic areas where resistance to heel marking, soil retention, and scuffing are of prime importance. Provides stunning highlights to colored or stamped concrete floors while offering excellent slip resistance. Recommended for use in malls, hotels, retail stores, hospitals and schools. *Final Coat can also be used on most conventional resilient floors (rubber, asphalt tile, vinyl, linoleum, and all types of composition tile)*.

Pro-Grade Cleaner



Pro-Grade Cleaner is a complete heavy-duty concrete and masonry cleaner designed specifically to clean dirt, grime, food, beverage and oil stains on interlocking paving stones, concrete, brick pavers and clay tile.

- Concentrated
- Use indoors or outdoors
- Safe and easy to use
- Effective on rust, grease and oil stains
- Removes food and organic stains
- Water-based, biodegradable
- Acid neutralizer

NOTE:

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Pro-Grade Cleaner is a complete heavy duty concrete and masonry cleaner and degreaser specifically designed to clean dirt, grime, food, beverage and oil stains on interlocking concrete paving stones, concrete, brick pavers, clay tile and most surfaces. This easy to use, safe, biodegradable cleaner does not form noxious fumes nor damage lawns or surrounding vegetation.

Pro-Grade Cleaner is concentrated and can be diluted with up to 10 parts water. Its dilution rate with water determines the cleaning power. It is a complete cleaner for any surface that is to be sealed, painted or stained. **Pro-Grade Cleaner** is also effective as a wood cleaner for removing grease and/or oil stains from wood. **Pro-Grade Cleaner** should always be used after acids are applied for cleaning. It will neutralize residual acids on surfaces when diluted with 5 parts of water. It is especially necessary if a sealer is to be applied. Failure to neutralize surfaces that have been cleaned with acid can de-stabilize and or reduce the life expectancy of the applied sealer.

Clean Concrete



Removes efflorescence, cement scale, rust and hard water deposits. **Clean Concrete** is an aggressive salt acid that will not pull pigment or etch the surface when applied as directed.

- Removes efflorescence
- Removes rust and cement scale
- Effective on pavers, concrete and brick
- Easy to apply
- Replaces heavy acids
- Environmentally safe, biodegradable
- Safe and easy to use, water clean up

NOTE:

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Clean Concrete is a fast acting biodegradable organic salt acid cleaner designed to remove efflorescence, rust, cement scale, mortar, lime deposits, sanded grout residue, hard water deposits and other heavily accumulated dirt and grime. This product is designed for use on non-polished surfaces like concrete pavers, brick, exposed aggregate, limestone, concrete, slate, granite, marble, sanded grout, porcelain and ceramic tile.

Clean Concrete is a certified 'green technology' product. With GST green products we guarantee compliance with current established green standards. This product is in manufacturing compliance with EPA/DfE, FDA, NSF, Green Seal, SCAQMD, DOT, Weights & Measures and Water Resource Board.

Pro-Grade Cleaner should always be used as a neutralizing rinse to restore the pH balance on all hardscape surfaces and is mandatory prior to sealing whenever **Clean Concrete** has been used. This will also apply to any acid staining and/or acid cleaning etching. Using **Pro-Grade Cleaner** as a neutralizer will ensure proper adhesion. This product is non-toxic and color safe for poured in place concrete, stamped concrete and paving stones.

Degreaser Pro



Degreaser Pro is a concentrated heavy duty concrete and masonry degreaser specifically designed to remove deep seated oil/grease stains, chewing gum residue and organic stains on all hardscape surfaces. **Degreaser Pro** should not be used on fabrics, aluminum or soft metals.

- Easy to apply Ready to use
- Removes deep seated oil and grease, stains, chewing gum, food and organic stains on all hardscape surfaces such as concrete, tile, brick, stone, grout & pavers.
- Safe for colored and stamped concrete.
- Concentrated.
- Safe and easy to use.
- Water-based.

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Degreaser Pro is concentrated and can be diluted with up to 12 parts water. Its dilution rate with water determines the cleaning power. It is a complete stain remover for any surface that is to be sealed, painted or stained. Residue from **Degreaser Pro** should be removed using soapy water. This step is necessary if a **GST sealer** or **Ecobeton® Vetrolfluid® ADP** (*Anti Deterioration Product*) is to be applied. Please contact our office to speak with one of our technical representatives for more information.

Degreaser Pro will solubilize and remove deep seated grease and oil stains. The solubilized residue must be completely rinsed immediately after use. **Degreaser Pro** will remove most stains but in some situations a discoloration may remain that is not removable. In the instances where old oil or stains have oxidized or penetrated to a depth of 1/4" or more, the use of a power washer, steam or a vacuum cleaning method may be required.

AREAS OF USE:

- Airports
- Stadiums
- Theme Parks
- Shopping Centers
- Swimming Pool Areas

- Gas Stations
- Plazas & Sidewalks
- Outdoor Food Courts & Restaurants

GST Sprayer

GST's high performance sprayer is specially designed for our sealers and ensures an even, well-distributed spray for best results.

- Three gallon capacity
- Braided chemical resistant hose
- Includes detachable tip that delivers a fan shaped stream
- Heavy-duty metal pump rod gives sprayer high durability
- Funnel top for easy filling
- Durable chemical resistant poly trigger action grip allows easy spray and shut-off
- Poly extension wand provides increased strength and resistance to chemical corrosion
- Valve locks on for constant spraying
- Valve locks off to prevent accidental discharge
- Replacement tips are available

GST sprayers are made with solvent and chemical resistant tips and seals, allowing for long term, multiple use applications. Using inexpensive garden-type sprayers is not recommended as they are not designed for solvents and will fail during application.



No-Slip Slip Resistant Additive

No-Slip is a micronized polymer (finely ground) Slip Resistant Additive that has been designed specifically for use in GST film forming sealers, which include: all Wet Look Lacquers, Lock 'N Seal and Satin Seal. No-Slip provides a comfortable walking surface for bare feet and will not dissolve in solvents, absorb oil or expand in water.

- GST's No-Slip must be applied using our GST Low Pressure Pump Sprayer.
- To ensure even application of No-Slip, continuous agitation while spraying is required.
- Using a brush or roller will cause uneven distribution of No-Slip additive, resulting in slippery areas.
- When applying No-Slip to pool coping, use an overspray paint shield to avoid getting sealer in the pool. Be sure to clean paint shield often to avoid excess sealer/No-Slip contaminating the pool water.
- NO-Slip cannot be used with penetrating sealers and must be used with film forming sealers.

DISPELLING THE MYTHS

Myth #1: You should wait to seal your pavers for at least a year after the installation.

The Truth: False, you must seal immediately! Don't wait for your expensive hardscape upgrade to become dirty and stained.

Efflorescence within your pavers will always be there. Reduce efflorescence blooms and make your paver surface attractive and easy to maintain by sealing as soon as the installation is complete.

Myth #2: The more sealer, the better.

The Truth: False, with GST's exterior acrylic sealers, whether water-based or solvent-based, more than one coat should never be applied. If you are dealing with an extremely porous product, two coats may be necessary, but for most surfaces, one coat is ideal. GST's sealers rely on breathability to allow for vapor transmission which helps prevent delamination due to hydrostatic pressure. Sealer manufacturers recommending two or more coats, do so because of their inferior technology.

Myth #3: Film-forming sealers, like acrylics, can last up to 10 years outside.

The Truth: False, sealers are maintenance products and will require regular maintenance and upkeep. As a rule of thumb, film-forming products will last 1-3 years in a typical exterior application. During the course of normal use, UV rays, pedestrian or vehicular traffic will cause wear to any sealer. Reapplication is based on the specific product's recommendation.

Myth #4: Surfaces do not always have to be clean and dry prior to applying sealers.

The Truth: False, moisture in the surface is trying to get out and this will prevent the sealer from getting in. Maximum penetration of your product into the surface is always beneficial. Always allow 24-48 hours after a rain, sprinklers, or cleaning prior to applying a sealer. If the surface is dirty, you will run the risk of losing the sealer's bond and locking into the surface whatever was on it (i.e.- dirt, oil, etc.). It is important to use *GST's Pro-Grade Cleaner* as a preparation tool prior to sealing. This will ensure no contaminants will affect the sealer's bond to the applied surface.

Myth #5: Concrete, including pavers, are impermeable and do not need to be sealed.

The Truth: False, concrete products are actually quite porous and will allow water and other substances to penetrate easily. While concrete is more durable than most other materials, it will last much longer, especially in severe weather environments if it is properly protected with the right sealer. Sealing should take place once the 28 day recommended curing period has been achieved. If the concrete will be exposed to organic staining or chemicals, *GST's Stain Block Elite* should be applied for maximum protection. These practices will significantly extend the lifecycle of your concrete surface.



FREQUENTLY ASKED QUESTIONS

1. How do I know if the project has been sealed before and what type of sealer was applied?

It is important to determine if the project was sealed prior to applying new sealer. Take a small spray bottle of water and simply apply to an area that you suspect has been sealed. If the pavement darkens considerably with the application of water, it most likely was not sealed recently and/or the sealer has worn off. Determining the type of sealer, solvent or water-based, is critical for application of the new sealer. If there is a residual amount of sealer left on the surface, it will need to be removed using a heated pressure washer surface cleaner and/or a stripping chemical. This will ensure acceptance of new sealer and will not cause a 'build up' that will eventually dull the finish. A build up or 'layers' caused by over application can also create 'blushing'. Blushing is when condensation forms between layers of sealer, causing a hazy white appearance.

An easy field test you can perform to determine the type of sealer that was previously applied, is to take a small amount of xylene, toluene or acetone and brush a small amount onto the surface you believe has been sealed. If the brushed on solvent darkens the pavement and appears to have emulsified residual sealer, it is a solvent-based sealer that had been applied. If the brush begins to drag while applying and the solvent turns slightly white, it is a water-based sealer.

2. When sealing Natural Stone, such as Travertine or Marble, how do I apply a 'no slip' surface especially on a smooth non textured product?

GST No-Slip must be applied with a film forming sealer such as *Wet Look Low Sheen*, *Wet Look High Gloss, Satin Seal and Lock'N Seal*. It can be mixed into the *GST Pump Sprayer* and applied evenly. It will be important to keep the spray tip clear.

To ensure even application of *No-Slip*, continuous agitation while spraying is required.

3. Why does the surface need to be dry when installing GST Sealers?

A clean and dry surface will ensure a deep penetration of the GST sealer achieving maximum longevity of the sealer. If a surface has water and impurities in the capillaries, the solids in the sealer will not be able to displace all of these impurities and the life expectancy of the sealer will decrease substantially. It is necessary to neutralize all acid-based products with *GST's Pro-Grade Cleaner* (ph balanced). If the area being cleaned has residual acid-based product that has dried on the surface without being neutralized, it can destabilize the sealer while shortening the life expectancy by up to 50%.

4. Is it necessary to apply a second coat to achieve maximum protection and enhancement?

All GST sealers are applied with a sprayer and only 1 coat is necessary to achieve maximum protection and enhancement. GST sealers penetrate deeply filling the capillaries with a one coat application. Additional coats will stay on the surface and the 'solids' will build up causing the pavement to become slippery.

5. What type of production can I expect on a prepared pavement when installing GST Sealers with the GST Low Volume Pump Sprayer?

You can expect installing approximately 1500-2000 square foot per hour with the *GST Pump Sprayer*. Porosity levels will affect the coverage, so be aware of the amount of absorption with the product you are sealing.

6. Do I have to strip an existing sealer prior to applying new sealer?

If you are applying a solvent-based sealer to an area that was previously sealed, you will need to evaluate the amount of existing sealer that is on surface. The solvent will emulsify the existing sealer and the new sealer will not penetrate into the pavement, potentially causing a slippery surface. Water-based sealers will not mix with solvent-based sealers and vice versa.

7. How do I revitalize existing sealed surface?

An existing solvent-based sealed surface can be revitalized without stripping the existing sealer by lightly spraying a 50% cut version of a GST solvent-based sealer. Acceptable solvents would include acetone, xylene and toluene. This will bring the surface back to its original beauty and luster.





CONTRACTOR'S TOOL BOX

The Three Main Objectives When Choosing A Sealer

Protection – All sealers will provide some type of protection. The degree of protection is contingent upon the type and quality of sealer applied, and the physical properties of what is being sealed. The product being sealed must be dry. Surface and ambient temperatures are critical factors in conjunction with application methods to ensure a quality installation and achieve maximum performance.

If the pavement is too hot, the carrier in the sealer (either water or solvents) will 'flash dry' not allowing the solids to penetrate into the capillaries. If this occurs, the life expectancy of the applied sealer will be compromised and the sealer will wear considerably faster.

GST's premium sealers are designed to give maximum protection against: sunlight, water penetration, efflorescence, organics and food staining, de-icing salts, chemicals, petroleum products and many other contaminants.

Enhancement – GST International's solvent-based sealers are designed to achieve maximum color densification and enhancement. Enriching the color or applying a 'glossy finish' will give the owner the aesthetic appeal they desire. GST's solvent-based sealers come in Wet Look Lacquer High Gloss and Wet Look Lacquer Low Sheen finishes.

GST International's water-based sealers will also enhance your hardscape surfaces if a less intense color enhancement is desired. Our water-based sealers also provide the same protection as our solvent-based sealers.

Stabilization – Joint stabilization will minimize segmental pavement failure. If the pavement has a sanded joint that exceeds a 12% slope, migration of sand and loss of sand due to water run off will cause pavement failure. If you have more than a loss of 1/2" of sand within the joint of a segmental pavement, it will lose interlock and the pavement will fail. Sealing and stabilizing the joint sand will ensure the stability and life expectancy of your segmental pavement.

Lock 'N Seal is GST International's state of the art sealer and joint sand stabilization product, which provides superior joint stability while enhancing and protecting the pavement.







CONTRACTOR'S TOOL BOX

Pressure Washing and Surface Cleaners – Understanding how to clean a surface by selecting the proper equipment and the proper cleaners will ensure maximum production and performance. Oil remediation, gum removal, soda stains, hard water stains, organic stains, mold/mildew, rust, dust and pollen are just a few of the problems that are dealt with.

Cleaning your hardscape project with a pressure washer and/or a surface cleaner is the first step in preparing for a successful project. It is strongly recommended to utilize a heated pressure washer to aid in the cleaning process. A heated pressure washer in conjunction with *Pro-Grade Cleaner* will remove most organic stains, weeds, and old polymeric sand in considerably less time than it would take with a cold water unit. A heated pressure washer will also aid in the removal of residual sealer and decrease the labor when 'stripping' old sealer off.

Note: For removal of deep seated oil/grease stains, chewing gum residue, and organic stains on all hardscape surfaces, please refer to page 12 for information on GST's *Degreaser Pro*.

Efflorescence Removal – **What is Efflorescence?** Efflorescence is a natural byproduct from the cement hydration process. Calcium oxide inside the paver reacts with water in the capillaries and forms calcium hydroxide. This migrates to the surface, and reacts with the carbon dioxide in the air to form calcium carbonate, a whitish residue. When moisture on the surface evaporates, the white efflorescence becomes visible.

Efflorescence is usually white in color and is more likely to be visible on darker pavements such as concrete pavers. When calcium oxide combines with carbon dioxide it forms calcium carbonate, which becomes very difficult to remove as it is no longer soluble with water.

Stringent cleaners such as muriatic acid can be very harmful to your pavement, causing irreversible damage to the surface. Most colorants for concrete are made from iron oxide (Fe_2O_3) or better known as rust. Strong acids like muriatic acid will dissolve these pigments permanently changing the appearance and etching the surface.

GST's ultimate solution to remove efflorescence from your hardscape project is *Clean Concrete*. When applied to the affected surface, *Clean Concrete* will effectively remove the efflorescence. In some cases, where the efflorescence has calcified, multiple applications may be required. Unlike other efflorescence cleaners, our state of the art, environmentally friendly *Clean Concrete* will limit the negative effects associated with other products.

Once the efflorescence has been removed, it is critical to neutralize the cleaned area with *Pro-Grade Cleaner* to allow for the proper adhesion of the GST Sealer. When a cleaner or acid is used, it is a common mistake not to neutralize the surface afterwards. Cleaner residue that dries on the surface of your project and is not neutralized, will drastically affect the life expectancy, adhesion performance, and integrity of the sealer applied.









CONTRACTOR'S TOOL BOX

Sealing

Water and solvent-based sealers have specific applications making it critical that you understand the physical properties of what you are sealing. Clay brick, pavers, natural stone, exposed aggregate concrete, stamped concrete, granite/marble or wet cast slabs all have different absorption rates. The porosity of the material you are sealing will affect recommended manufacturer coverage, desired finish of sealer, and the amount of protection achieved.

Clay brick can have varying densities that effect porosity. The range can be from as low as 1-3% and as high as 35% with absorption. If the absorption rate is higher, the solids will penetrate and not settle on the surface leaving a 'non-glossy finish'. If you were to install a 'satin finish' sealer on dense products like Travertine or Marble, the results would be more of a 'glossy finish' because the solids in the sealer have particle size larger than the capillaries in the product being sealed.

The following is a good starting point to reference for absorption rates:

- Concrete Pavers 5%
- Bluestone 20%-25%
- Exposed Aggregate 8%-12%
- Marble polished 3%-5%, textured 5%-8%
- Stamped Concrete 15%-20%
- Flagstone and Slate 12%-20%
- Travertine 5%-15%
- Clay Brick 5% to 35%

Sealer Application Best Practices

GST offers the following solutions that will enable contractors, maintenance crews and home owners to achieve maximum sealing results and performance.

Water or solvent-based sealers deliver the solids into the capillaries and when it evaporates, the capillaries are filled with sealer. If the surface being sealed has existing moisture in the capillaries, the particle solids in the sealer will stay closer to the surface and not penetrate. This result will create an ineffective coating that will decrease the life of the sealer and its protective impact. The surface being sealed will achieve maximum protection and aesthetics when it is completely dry.

All GST Sealers are applied with our *Low Volume Pump Sprayer*. Applying sealer on perimeter edges with a roller is acceptable to eliminate overspray on vegetation and surrounding structures. Using the *GST Low Volume Pump Sprayer*, add sealer up to the top of the GST Logo printed on the sprayer. Pump the sprayer approximately 30 times to pressurize the tank. Hold the spray wand 8"-10" above the surface and begin to apply the sealer using an overlapping circular motion to ensure an even application. To maintain a consistent even flow of sealer, it will be necessary to continually pump up the sprayer as the pressure in the tank decreases. The surface will appear 'wet-damp' for 8-10 seconds. If you over-apply the sealer and create puddles, it will be necessary to stop spraying and disperse additional sealer on the surface with a blower. Back-rolling solvent-based sealers may leave application lines on the surface. On segmental pavement systems, application of any sealer with a roller is not recommended as it will pull sand from the joint and will deposit it on the surface causing an undesirable result. *Please refer to the instructions on each sealer label, as they will vary.*













Innovative Solutions for the Construction Industry

	Product Characteristics:											Use with:														
Product Guide	High	(10%)	Sheen Satif	il knit	spe	Lika	in Red	Red Red	i des	se sid	jil Sefflor Resi	estence St. Spall	ind oil Ren	one bro	ind's Ind's	lesens de la constante de la c	ior appropries	in Sur	ise and see an	ides (kosed kosed	hodeo Hoge Bil	at Washing	its was	ne o Tri interior	reline ed took ed took ed took
High Gloss Wet Look	~					~	~	~	~	~	~				~	~	~	/	~	~		~	~			
Low Sheen Wet Look		~	~			~	~	~	~	~	~				~	~	~	~	~	~		~	~			
Lock n Seal			~		~		~	~	~	~	~				~	~	~	~	~	~	~	~	~			
Satin Seal			~		~		~	~	~	~	~				~	~	~	~	~	~	~	~	~	~		
Final Coat	~				~										~			~	~				~		~	V
Stain Block Elite				~			~	~	~	~	~				~	~	~	~	~	~	~	~	~	~		
Pro-Grade Cleaner												~			~	~	~	/	~	~	~	~	~	~		
Clean Concrete													~			~	~	/	~	~	~	~	~	~		
DeGreaser Pro												~			/	/	V	/	/	/	/	~	/	/		✓

All products are available in standard one gallon and five gallon sizes. 55 gallon drums and 275 gallon totes are also available upon request.

Our products are made from the finest raw materials available and manufactured to proven formulation under strict quality control for its intended use. However, results obtained with the use of our products under a variety of conditions may depend on circumstances beyond our control.

GST International, Inc. (including the seller thereof) warrants only that its products will be free from defects in materials. GST International, Inc.'s (including the seller thereof) sole obligation, and the purchaser's (including the person using or benefiting from its use) sole and exclusive remedy in the event of a defect covered by the foregoing warranty, shall be, at GST International, Inc.'s discretion, to (a) replace the defective product, or (b) refund to the purchaser the purchase price paid for such defective product. There are no warranties other than the limited express warranty provided above. In no event shall GST International, Inc. (or the seller of its products) be liable for incidental or consequential damages resulting or arising from the use of its products.

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