Guide to common masonry stains

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Sure Klean
MASONRY CLEANING PRODUCTS

You. Us. The project.

800 255 4255  PROSOCO.COM
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Stains, stains, go away...

Need help removing a stain from concrete & masonry? That’s where PROSOCO can help. We have a catalog of effective and easy-to-use products to help clean an expansive range of stains. Our highly trained customer care team and field representatives are your best resources for stain identification. Wherever the job, we’re here to help you make your project look its best.
**Rust**

**Description** – Red, orange or brown staining on the face of the substrate itself or concentrated along the edges of the substrate.

**Cause** – Rust staining originates from ferrous metals adjacent to or embedded in the substrate. Reacting with air, water, salts and some cleaning compounds, such metals oxidize to produce superficial rust staining or stains that are deeply embedded.

**Removal** – Apply Sure Klean Ferrous Stain Remover, Sure Klean 800 Stain Remover or Sure Klean Light Duty Restoration Cleaner per label instructions to remove superficial staining. Deeply embedded staining is difficult to remove and may reappear as substrates continue to dry. Contact PROSOCO for recommendations to remove deeply embedded stains.

**Prevention** – Protect wall cavities from rainwater during construction. Prevent moisture from getting to metal near the substrate by covering with plastic. Protect the substrate with the appropriate Sure Klean Weather Seal or Stand Off water repellent.

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**Excess mortar**

**Description** – Mortar smears or droppings on the face of masonry or surrounding materials.

**Cause** – Excess mortar is dropped or smeared onto the face of the masonry or surrounding materials during placement and allowed to cure.

**Removal** – Test Sure Klean 600 on red brick with gray mortar; test Sure Klean Vana Trol on colored brick, brick with colored mortar, sandstones, flagstones, slate, limestone, marble, travertine and unpolished granite; test Light Duty Concrete Cleaner on concrete brick or smooth-faced concrete block; test Custom Masonry Cleaner on textured concrete block; and test Heavy Duty Concrete Cleaner on standard gray concrete or block. Follow label instructions. For surrounding non-masonry surfaces, contact Customer Care for recommendations.

**Prevention** – Protect non-masonry with tarp, plastic, plywood or other suitable cover to minimize soiling. Cleanup droppings and smears during placement before curing. Mortar residues on new masonry clean most effectively within 14–28 days of installation. Smears left longer result in a more difficult clean down. Cleaning high-strength mortar/grout within seven days improves results.

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**Job dirt, dust, mud and clay**

**Description** – Contaminants from the job site during construction, usually dirt, red mud, mud and/or mild atmospheric staining.

**Cause** – Stains collect on surfaces due to construction, wind, rain or work by other trades.

**Removal** – Most job dirt can be removed with water via a hose or pressure washer. More stubborn stains can be removed using Enviro Klean 2010 All Surface Cleaner. Red clay mud stains can be cleaned with Sure Klean Light Duty Restoration Cleaner. Follow label instructions.

**Prevention** – Substrates can be protected with a tarp, plastic, plywood or other suitable cover to minimize soiling. Spread hay or straw near the base of the wall to reduce mud splashes or mortar droppings.
Green vanadium

**Description** - Yellow, green, green/brown or purple stains in the heart of light-colored brick units common in new or water-saturated construction.

**Cause** - A form of efflorescence, water-soluble vanadium salts dissolve in rainwater, construction water or muriatic acid and migrate to the surface upon drying. As the surface water evaporates, colorful salts form on masonry surface to create unsightly stains.

**Removal** - Let masonry dry thoroughly. Apply Sure Klean 800 Stain Remover following label instructions.

**Prevention** - Protect wall cavities and brick cubes from rain during construction. Let masonry dry thoroughly before cleaning with Sure Klean Vana Trol – the original proprietary masonry cleaner developed to control vanadium staining. Protect the cleaned bricks with Weather Seal Siloxane PD or Siloxane WB Concentrate.

Brown manganese

**Description** - Tan, brown or gray staining concentrated along mortar joints of brown, gray or other manganese-colored brick.

**Cause** - A form of efflorescence, manganese dioxide dissolved in rainwater, construction water or muriatic acid migrates to the surface upon drying. As water evaporates, manganese reacts with the alkaline mortar joint to create an unsightly brown stain.

**Removal** - Let masonry dry thoroughly. Apply Sure Klean 800 Stain Remover following label instructions.

**Prevention** - Remove job dirt and excess mortar from bricks prone to manganese staining using Sure Klean Vana Trol. Protect wall cavities and brick cubes from rain during construction. Let masonry dry thoroughly before cleaning. Protect the cleaned bricks with Weather Seal Siloxane PD or Siloxane WB Concentrate.

White scum

**Description** - Uneven white or gray stain on brick face or mortar joints. Often appears as vertical run marks. Does not disappear when wet.

**Cause** - Inadequate pre-wetting or rinsing when cleaning with muriatic acid or other acidic solutions. Portland cement mortar dissolved by the acid is absorbed by the dry wall surface to produce insoluble silicate salts commonly referred to as “scumming.”

**Removal** - Use Sure Klean White Scum Remover following label instructions.

**Prevention** - Clean with the appropriate Sure Klean new brick cleaner.
Oil and grease

**Description** - A viscous liquid derived from petroleum, or an oily or fatty liquid on or in the surface causing discoloration or darkening of the substrate.

**Cause** - Typically appears in areas where vehicular traffic or construction equipment has been parked or driven. Stains also can be from a ruptured hydraulic hose on a fork lift. Also appears where food has been prepared or consumed.

**Removal** - Before cleaning, let the masonry dry thoroughly. To clean the surface, use Enviro Klean 2010, Consolideck Cleaner/Degreaser, Sure Klean Asphalt & Tar Remover or Sure Klean Fast Acting Stripper. For embedded stains, use Stand Off Oil & Grease Stain Remover. Follow label instructions.

**Prevention** - Protect the surface with plastic, plywood or other suitable surface to minimize staining. Stand Off SLX100 can be applied to protect substrate. Stand Off Stone, Tile & Masonry Protector can also be used.

Acid burn

**Description** - Uneven yellow or gold stain on brick face and in mortar joints. Stained areas may also exhibit severe etching or mortar discoloration.

**Cause** - Cleaning with muriatic acid. Acid and impurities in the acid are rapidly absorbed by porous masonry and cannot be thoroughly water-rinsed. As the acid attacks the bricks and mortar, soluble and insoluble salts are mobilized to create unsightly stains.

**Removal** - Test Sure Klean 800 Stain Remover on brick; test Sure Klean Light Duty Concrete Cleaner on concrete and block; test Sure Klean Custom Masonry Cleaner on concrete and block; and test Sure Klean Heavy Duty Concrete Cleaner on standard gray concrete and block.

**Prevention** - Clean with the appropriate Sure Klean new construction cleaner.
Graffiti

**Description** – Writing or drawings that have been marked, scratched or illicitly sprayed on a substrate. Common tools used are permanent markers, spray paint, etc.

**Cause** – Intentional use of spray or markers to deface a substrate.

**Removal** – Several products can be used based on substrate and graffiti type: Defacer Eraser Graffiti Wipe, Sure Klean Fast Acting Stripper, Sure Klean Heavy Duty Paint Stripper, Enviro Klean SafStrip and Enviro Klean SafStrip 8. Follow label instructions.

**Prevention** – Surfaces are easier to clean when treated with Sure Klean Weather Seal Blok-Guard & Graffiti Control, Sure Klean Weather Seal Blok-Guard & Graffiti Control 15, or Defacer Eraser Sacrificial Coating SC-1.

Algae/Lichen

**Description** – Biological growth that can be green, gray, black, red, orange or brown. Found most often on limestone, marble, concrete, mortar or other surfaces that contain calcium. Algae and lichen may completely cover surfaces that are frequently or continuously wet.

**Cause** – Biological growth thrives when moisture and a food source – such as calcium carbonate or organic matter -- coincide on portions of buildings that are not exposed to constant sunlight.

**Removal** – Depending on the severity of the staining, Enviro Klean ReVive and Enviro Klean ReKlaim are made to remove biological soiling following label instructions.

**Prevention** – Protect cleaned masonry with the appropriate Sure Klean Weather Seal or Stand Off water repellent.

Oil and grease

**Description** – A viscous liquid derived from petroleum, or an oily or fatty liquid on or in the surface causing discoloration or darkening of the substrate.

**Cause** – Typically appears in areas where vehicular traffic or construction equipment has been parked or driven. Stains also can be from a ruptured hydraulic hose on a fork lift. Also appears where food has been prepared or consumed.

**Removal** – Before cleaning, let the masonry dry thoroughly. To clean the surface, use EK 2010, Consolideck Cleaner/Degreaser, Sure Klean Asphalt & Tar Remover or Sure Klean Fast Acting Stripper. For embedded stains, use Stand Off Oil & Grease Stain Remover. Follow label instructions.

**Prevention** – Protect the surface with plastic, plywood or other suitable protection to minimize staining. Apply Stand Off SLX100 or Stone, Tile & Masonry Protector to prevent absorption of oil and grease stains.
Copper stains

**Description** – Black, green or greenish-blue stain surrounding adjacent or embedded copper-containing (copper, brass, bronze) metals.

**Cause** – Exposure to atmospheric elements causing oxidation of the architectural metals containing copper. Water mobilizes the staining from adjacent metals and transfers it to the substrate. Oxidation of embedded metals migrates to the surface as the substrate dries.


**Prevention** – Protect metals containing copper with appropriate sealer to limit weathering exposure. Protect adjacent masonry with appropriate Sure Klean Weather Seal or Stand Off water repellent.

Water repellent blush

**Description** – Curtain streaks, white patchy residue, or tacky residue on the masonry surface.

**Cause** – Overspray, over-application or failure of water repellent emulsions to properly cure after application.

**Removal** – Use Sure Klean Dicone NC 9 or Dicone NC 15 Gel. Follow label instructions.

**Prevention** – Choose the appropriate Sure Klean Weather Seal water repellent. Follow application instructions, control the rate of application and avoid overspray.

Carbon stain

**Description** – Stain is usually dark brown, gray or black. On acid-resistant silicate surfaces (sandstone, granite, brick, terra cotta) exposed to heavy pollution, carbon stains may obscure the entire surface. On acid-sensitive carbonate surfaces (limestone, marble, travertine), carbon stains accumulate in carved recesses that are not exposed to rain washing.

**Cause** – Staining is due to pollution created by current or past burning of fossil fuels – coal, oil, gasoline, etc. This leaves a sticky, water-resistant film over the face of the substrate. Airborne pollutants adhere to the film and accumulate progressively on the surface. On acid-sensitive carbonate surfaces, acid rain erodes carbon accumulation from projecting elements, leaving such surfaces with pronounced streaking. In severe cases, calcium sulfate crusts form in carved recesses, weakening the underlying stone.


**Prevention** – Keep moisture out of the substrate by protecting it with the appropriate Sure Klean Weather Seal or Stand Off water repellent. Reduce the sensitivity of carbonate substrates to acid rain with Conservare HCT.
Silicone sealant bleed

**Description** - Dark or light bands on either side of soft silicone joints. Seen most often in natural stone or concrete panels.

**Cause** - Non-drying silicone oils from the sealant joint leach into the adjacent stone, concrete or masonry substrate. Light bands result when the leached oils repel water. Dark bands result when the leached oils attract airborne particulate.

**Removal** - Remove the sealant causing the stain. Replace with new sealant which is proven to be non-bleeding. Prime as recommended by the sealant manufacturer. Use Sure Klean Dicone NC 9 or Sure Klean Dicone NC 15 Gel to remove residual staining. Depending on the severity and depth of staining, repeated applications may be required. Follow label instructions.

**Prevention** - Many silicone sealant manufacturers recommend joint primers to prevent or minimize silicone sealant bleed. Choose a high-quality, non-bleeding sealant. Follow manufacturer’s installation instructions.

Asphalt and tar

**Description** - Black or dark brown stains or tacky films.

**Cause** - Staining can occur from road/parking lot construction or repair; roof construction or repair; or below-grade waterproofing.

**Removal** - Sure Klean Asphalt & Tar Remover and Sure Klean Fast Acting Stripper are the recommended products. Follow label instructions.

**Prevention** - Cover the adjacent substrates with protective films or sheets during construction.
Restoration

Paint

Description - Fluid-applied films of varied composition, color and texture applied to the underlying substrate. It is often necessary to remove paint films to restore the substrate’s original appearance, execute needed repairs or prepare the surface for repainting. Paint may adversely affect the ability of the underlying surface to dry, resulting in staining or premature deterioration.

Cause - Most paint is intentionally applied to alter the appearance, weathering resistance or performance of the underlying substrate. Accidental exposure occurs when paint is being applied to adjacent or overhead surfaces.

Removal - Enviro Klean SafStrip, Enviro Klean SafStrip 8, Enviro Klean Safety Peel 1, Sure Klean Heavy Duty Paint Stripper, Sure Klean Fast Acting Stripper and Defacer Eraser Graffiti Wipe can be used following label instructions.

Prevention - Protect adjacent masonry with protective films or sheets, drop cloths or other protective materials prior to painting.

Reminder: A test panel should be conducted on all coatings that need to be stripped to determine the most appropriate product and dwell time. The table below is to be used as a guideline as to which products to try on each type of coating.

<table>
<thead>
<tr>
<th>Paint/Coating type</th>
<th>Description</th>
<th>Acrylic</th>
<th>Alkyd</th>
<th>Polyurethane</th>
<th>Epoxy</th>
<th>Spray paint (Enamel)</th>
<th>Elastomeric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrylic</td>
<td>Acrylics are used in high-performance solvent or water-based paints and coatings. They are most commonly found in concrete sealers, cure and seal products, floor finishes, vertical and horizontal paints, etc.</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Alkyd</td>
<td>Alkyds are synthetic resins based on oils used in a lot of older architectural coatings. Today, alkyd paints are mostly used as interior trim paints or combined with acrylics or polyurethanes for exterior use.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Polyurethane</td>
<td>Polyurethane paints and coatings come in either one or two parts, water or solvent-based, and dry to very hard, durable, chemical-resistant films.</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Epoxy</td>
<td>Epoxy paints and coatings come in either one or two parts, water or solvent-based, and dry to very hard, durable, chemical-resistant films. Used primarily in floor coatings.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Spray paint (Enamel)</td>
<td>Spray paint is typically made from acrylic or polyurethane resins that dry to a very hard durable finish. Used as markings for utilities, designated areas, stenciling letters, etc., or for illicit graffiti tagging.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Elastomeric</td>
<td>Elastomeric wall coatings are generally acrylic latex paints designed to be applied in very thick films (about 10 times as thick as regular paints) that are tough and flexible, and stretch as cracks underneath open and close. They are used on masonry surfaces like concrete, stucco and concrete block, as well as wood and metal.</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
# Masonry stain removal

<table>
<thead>
<tr>
<th>Stain</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown manganese</td>
<td>800 Stain Remover</td>
</tr>
<tr>
<td></td>
<td>Ferrous Stain Remover</td>
</tr>
<tr>
<td>Acid burn</td>
<td>800 Stain Remover</td>
</tr>
<tr>
<td>Lime run</td>
<td>Custom Masonry Cleaner</td>
</tr>
<tr>
<td></td>
<td>Heavy Duty Concrete Cleaner</td>
</tr>
<tr>
<td>Green vanadium</td>
<td>800 Stain Remover</td>
</tr>
<tr>
<td>Job dirt/dust</td>
<td>Vana Trol</td>
</tr>
<tr>
<td></td>
<td>2010 All Surface Cleaner</td>
</tr>
<tr>
<td></td>
<td>Safety Klean</td>
</tr>
<tr>
<td></td>
<td>Vana Trol</td>
</tr>
<tr>
<td>White scum</td>
<td>White Scum Remover</td>
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<tr>
<td>Paint</td>
<td>Fast Acting Stripper</td>
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<tr>
<td></td>
<td>Heavy Duty Paint Stripper</td>
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<tr>
<td></td>
<td>Safety Peel 1</td>
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<tr>
<td></td>
<td>SafStrip</td>
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<tr>
<td></td>
<td>SafStrip 8</td>
</tr>
<tr>
<td>Asphalt, tar, oil</td>
<td>Cleaner/Degreaser</td>
</tr>
<tr>
<td></td>
<td>Asphalt &amp; Tar Remover</td>
</tr>
<tr>
<td>Rust</td>
<td>Ferrous Stain Remover</td>
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<td></td>
<td>800 Stain Remover</td>
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<tr>
<td></td>
<td>Light Duty Restoration Cleaner</td>
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<tr>
<td>Algae, lichen</td>
<td>ReKlaim</td>
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<tr>
<td>Copper</td>
<td>ReVive</td>
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<tr>
<td></td>
<td>800 Stain Remover</td>
</tr>
<tr>
<td></td>
<td>515 Copper Stain Remover*</td>
</tr>
<tr>
<td>Silicone sealants</td>
<td>Dicone NC9</td>
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<tr>
<td></td>
<td>Dicone NC15 Gel</td>
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<tr>
<td>Mud</td>
<td>Restoration Cleaner</td>
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<td></td>
<td>Light Duty Restoration Cleaner</td>
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<tr>
<td>Hard water deposit</td>
<td>1261 Hard Water Deposit Remover</td>
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<td></td>
<td>Custom Masonry Cleaner</td>
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<tr>
<td>Efflorescence</td>
<td>600</td>
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<td></td>
<td>Safety Klean</td>
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<tr>
<td></td>
<td>Vana Trol</td>
</tr>
<tr>
<td>Oil and grease</td>
<td>Asphalt &amp; Tar Remover</td>
</tr>
<tr>
<td></td>
<td>Cleaner/Degreaser</td>
</tr>
<tr>
<td>Graffiti -- Unprotected surface</td>
<td>Fast Acting Stripper</td>
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<tr>
<td></td>
<td>SafStrip 8</td>
</tr>
<tr>
<td>Graffiti -- Protected surface</td>
<td>Graffiti Wipe</td>
</tr>
<tr>
<td></td>
<td>SafStrip 8</td>
</tr>
</tbody>
</table>

Always test to ensure desired results and proper dilution where appropriate.

* Special order only. Call 800-255-4255 for more information.
Protective treatments

Weather Seal
Siloxane PD (Predilute)
is a ready-to-use, water-based silane/siloxane water repellent for concrete and most masonry and stucco surfaces. Siloxane PD will not impair the natural breathing characteristics of treated surfaces. It helps masonry resist cracking, spalling, staining and other damage related to water intrusion.

Weather Seal
Siloxane WB Concentrate
is a concentrated water repellent designed for dilution with fresh water at the job site. This solvent-free blend of silanes and oligomeric alkoxysiloxanes mixes easily with water to produce a penetrating water repellent ideal for application to dense or porous masonry surfaces.

Weather Seal
Blok-Guard & Graffiti Control II
is a clear-drying, water-based silicone emulsion for weatherproofing concrete block and other porous masonry materials. Blok-Guard & Graffiti Control II protects interior and exterior masonry surfaces from graffiti attacks without altering the natural appearance.

Weather Seal
Natural Stone Treatment WB Plus
is a water-based water repellent for limestone, marble and travertine that delivers the same performance as solvent-based products, without the drawbacks of traditional water-based treatments.

Weather Seal
Blok-Guard & Graffiti Control Ultra
is a clear, solvent-based silicone elastomer formulated to weatherproof concrete block and other porous masonry materials. Blok-Guard & Graffiti Control Ultra protects masonry surfaces from repeated graffiti attacks without altering the natural appearance.

Consolideck
Saltguard WB
is a ready-to-use, water-based, VOC-compliant silane/siloxane water repellent and “chloride screen” for the protection of concrete and masonry. Saltguard WB protects horizontal and vertical surfaces from moisture intrusion and chemical attack of chloride salts.

Weather Seal
SL100
Protects vertical concrete and masonry surfaces against water and waterborne contaminants. The small molecular structure ensures maximum penetration and colorless protection of dense, color-sensitive surfaces.

Stand Off
SLX100 Water & Oil Repellent
Combines water and oil repellency on most substrates to prevent staining by waterborne and oily substances. This modified “neat” silane system offers invisible protection and low volatility.
Let beauty and value endure

Whether it's brand new or centuries old, let the beauty — and value — of your masonry endure with PROSOCO's other products for cleaning, protecting and maintaining concrete, brick and stone.

**Defacer Eraser products**

It's a fact – rapid removal is the key to eliminating graffiti. PROSOCO's Defacer Eraser line is the key to rapid removal. Graffiti practically slides off surfaces treated with Defacer Eraser graffiti removers and protective treatments.

**Weather Seal products**

Give your vertical and horizontal concrete and masonry deep, long-lasting protection against salt attack, water penetration and more.

**Stand Off tile and stone care products**

The value of stone or ceramic tile surfaces drops with every ground-in bit of grease, grime, food, oil or other contaminant that besmudges it. Water penetration, and its destructive freeze-thaw cycle, ruins expensive masonry. Keep those enemies at bay with Stand Off products.

**Sure Klean new construction cleaners**

New construction cleaning makes all the difference in the appearance of a new building. Safely strip excess mortar, job dirt, efflorescence and other staining from new masonry surfaces.

**Consolideck lithium silicate floor hardeners**

Concrete floors are harder, denser and shinier when treated with Consolideck LS or LSGuard. Easy to apply with a brush, roller or spray, these products require no scrubbing or flushing. Great for decorative concrete or utility gray.

**R-Guard air- and water-resistive barriers**

Keep destructive air and water from leaking into wall assemblies during construction and for the life of the building. Structural, breathable, durable and continuous, R-Guard products drive energy bills down and mold-resistance up!