MOXIE SHIELD 3000

CONCRETE & MASONRY CLEANER

FREQUENTLY ASKED QUESTIONS

Architects · Engineers · Contractors · Producers · Owners · Specifiers

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PRODUCT OVERVIEW

Moxie Shield 3000 Concrete & Masonry Cleaner

Moxie Shield 3000 Concrete & Masonry Cleaner is a heavy-duty, water-based alkaline detergent formulated to remove oil, grease, efflorescence, dusting, and construction residue from concrete and masonry surfaces. The preparation product in the Moxie Shield system, it is specifically designed as the pre-treatment step before applying any Moxie penetrating sealer.

At pH 12.3, Moxie Shield 3000 Concrete & Masonry Cleaner penetrates large-pore substrates and breaks contaminants into suspended particles that rinse away cleanly without redepositing. The zero-VOC, non-flammable, non-toxic formulation will not harm concrete or masonry and leaves no film or residue — restoring natural surface appearance and preparing the substrate for optimal sealer penetration.

pH 12.3	VOC = 0	USDA	No Residue
Alkaline cleaning action	EPA 24 certified	Food safe approved	Film-free after rinsing

ARCHITECTS

Questions for Architects

Where the 3000 fits in the Moxie system — substrate preparation for design-sensitive masonry and concrete assemblies.

ARCHITECTS

What is Moxie Shield 3000 Concrete & Masonry Cleaner and where does it sit in the Moxie Shield product system?

Moxie Shield 3000 Concrete & Masonry Cleaner is a heavy-duty concrete and masonry cleaner — the preparation product in the Moxie Shield line. Every Moxie penetrating sealer (1100 through 2000) requires a clean, absorptive substrate to perform effectively. The 3000 is specifically formulated as the pre-treatment that gets substrates to that condition: removing efflorescence, dusting, laitance, atmospheric contaminants, oil, grease, and construction residue that would block sealer penetration or contaminate the final surface. It is compatible with all Moxie penetrating sealers and is documented as the recommended pre-treatment across the line.

ARCHITECTS

Will it alter the surface appearance of architectural concrete or masonry?

No. Moxie Shield 3000 Concrete & Masonry Cleaner restores the natural surface appearance of concrete and masonry rather than altering it. It does not leave a film, coating, or residue when rinsed. For architecturally exposed concrete, split-face CMU, decorative masonry, and natural stone where surface appearance is a design specification, the 3000 cleans without changing color, sheen, or texture — a critical distinction from acid cleaners that etch surfaces and alter the character of architectural finishes.

ARCHITECTS

What masonry and concrete surface types is it appropriate for?

Moxie Shield 3000 Concrete & Masonry Cleaner is formulated for concrete masonry units, concrete block, shotcrete and gunite, mortar and grout, precast and cast-in-place concrete, stone and decorative masonry, and weathered or dusty substrates prior to sealing. Coverage rate is 100 to 200 sq ft per gallon for general cleaning and 75 to 150 sq ft per gallon for heavy efflorescence conditions.

ARCHITECTS

Why is it preferable to acid-based cleaners for pre-sealing preparation?

Acid cleaners etch concrete and masonry surfaces — changing surface texture, opening pore structure unpredictably, and leaving acid residue that can interfere with the chemical reaction of penetrating sealers. Moxie Shield 3000 Concrete & Masonry Cleaner achieves strong cleaning action at pH 12.3 through alkaline chemistry — emulsifying oils and greases, deflocculating insoluble particles, and rinsing contaminants away in suspension without attacking the substrate itself. It will not harm concrete, does not leave residue, and prepares the surface for sealer penetration without the compatibility and surface integrity risks of acid treatment.

ENGINEERS

Questions for Engineers

Chemistry, cleaning mechanism, technical specifications, and substrate compatibility.

ENGINEERS

What is the cleaning chemistry and how does it work at the substrate level?

Moxie Shield 3000 Concrete & Masonry Cleaner operates through three complementary mechanisms. Emulsification homogenizes grease, oil, and fat into small particles dispersed evenly in water, preventing them from recombining. Deflocculation separates insoluble particles — dust, earth, clay — that are then caused to repel each other. Detergency suspends both types of particles in solution and allows them to be rinsed away without redepositing on the cleaned surface. At pH 12.3, the alkaline formulation provides aggressive action against organic contaminants and efflorescence without attacking the silicate mineral structure of the concrete or masonry substrate.

ENGINEERS

What are the key technical specifications?

Appearance: clear to slight straw. Specific gravity: 1.02. pH: 12.30. VOC: 0 g/L (EPA Method 24). Solubility: fully soluble. Evaporation rate: 1 (Butyl Acetate = 1). Flash point: none — non-combustible. The zero-VOC, water-based, non-flammable formulation means it can be used in enclosed spaces, occupied facilities, food processing environments, and sensitive job sites where solvent-based or acid cleaners would be restricted. USDA approved for use in food processing areas. Complies with OSHA 29 CFR 1910.

ENGINEERS

How does the alkaline pH interact with efflorescence and why is it effective?

Efflorescence consists primarily of calcium hydroxide and calcium carbonate salts deposited on the surface by migrating water. At pH 12.3, Moxie Shield 3000 Concrete & Masonry Cleaner's alkaline chemistry is highly effective at solubilizing calcium-based deposits and lifting them into suspension for rinsing. The alkaline action also saponifies oils and greases — converting them to water-soluble soaps — which is why the product is particularly effective on petroleum contamination from service stations, repair shops, and industrial environments. The mechanism is chemically safe for the underlying concrete matrix, unlike acid treatments which dissolve calcium silicate hydrate and weaken the substrate.

ENGINEERS

Is it compatible with all Moxie Shield penetrating sealers, and what is the required drying period before sealing?

Yes — Moxie Shield 3000 Concrete & Masonry Cleaner is specifically documented as compatible with all Moxie penetrating sealers (1100 through 2000). After application and rinsing, the surface must be allowed to dry completely before applying any penetrating sealer. The drying requirement is critical: penetrating sealers require a dry, absorptive surface to penetrate effectively. Thorough rinsing is equally important — any cleaner residue remaining in the pore structure could interfere with the sealer's chemical reaction. Rinse thoroughly and allow adequate drying time, particularly in cool or humid conditions.

CONTRACTORS & APPLICATORS

Questions for Contractors and Applicators

Application method, dwell time, coverage rates, safety requirements, and sequencing before sealer application.

CONTRACTORS & APPLICATORS

What is the application procedure and what equipment is needed?

Moxie Shield 3000 Concrete & Masonry Cleaner is simple to apply. Step 1: agitate the product before use. Step 2: apply by sprayer, brush, or low-pressure equipment to the prepared surface. Step 3: allow a dwell time of 5 to 10 minutes — do not allow the product to dry on the surface. Step 4: scrub heavily soiled areas with a stiff bristled, long-handled brush. Step 5: rinse thoroughly with clean water — high-pressure rinsing is recommended for heavily soiled areas. Note: hot water significantly enhances cleaning effectiveness and should be used when available. Step 6: allow the surface to dry completely before applying any Moxie penetrating sealer. Petroleum-based and toxic materials removed during cleaning must be disposed of properly.

CONTRACTORS & APPLICATORS

What surface preparation is required before applying the 3000?

Surfaces should be thoroughly swept or blown clean of all loose debris before application. Power washing before applying the 3000 is recommended, preferably with hot water. Protect all vegetation and non-masonry surfaces — the high pH formulation must not contact plant life or leather, and must not contact glass, porcelain, ceramic tile, aluminum, zinc, or galvanized steel. It will permanently etch or erode these materials. Mask and protect all adjacent incompatible surfaces before beginning. Test a small area prior to full application.

CONTRACTORS & APPLICATORS

What are the coverage rates and how do they vary by condition?

General cleaning on standard concrete and masonry: 100 to 200 sq ft per gallon. Heavy efflorescence conditions: 75 to 150 sq ft per gallon. Coverage is determined by substrate porosity and contamination level — heavily soiled or highly porous substrates will consume more product. For large-area applications, work in sections to ensure dwell time is maintained without allowing the product to dry on the surface.

CONTRACTORS & APPLICATORS

What are the critical safety requirements for application?

Moxie Shield 3000 Concrete & Masonry Cleaner is a strong alkaline detergent at pH 12.3 — rubber gloves and suitable eye protection (goggles or face shield) are required for all application. Avoid contact with eyes, skin, and clothing. Avoid breathing spray mist — masks are recommended during spray application. Promptly clean any residue or spills from unintended surfaces with a cloth dampened with water. The product is non-toxic, non-hazardous, non-flammable, and USDA approved for food processing areas, but its high pH requires appropriate PPE and surface protection during application.

CONTRACTORS & APPLICATORS

How does the 3000 fit into a complete sealing project sequence?

The 3000 is the first step in any Moxie sealing project on existing concrete or masonry. Clean with the 3000, rinse thoroughly, allow to dry, then verify absorptivity with the Water Absorption Test before applying the appropriate Moxie penetrating sealer (1100 through 2000 depending on substrate and application). For new construction without contamination, the 3000 may not be required — consult the individual product data sheets. For remediation projects and restoration work, or any situation where the substrate has prior contamination, the 3000 is the required first step before sealer application.

Questions for Facilities and Maintenance Managers

Routine maintenance, industrial cleaning, and protecting the sealer investment over time.

FACILITIES AND MAINTENANCE MANAGERS

What types of facilities is Moxie Shield 3000 Concrete & Masonry Cleaner designed for?

Moxie Shield 3000 Concrete & Masonry Cleaner is documented as an ideal cleaner for harsh environment surfaces including service stations, repair shops, aviation hangars, breweries, and farms — environments where petroleum, grease, and heavy organic contamination are ongoing. Beyond these, it is appropriate for any facility with concrete or masonry floors, walls, or outdoor surfaces requiring periodic maintenance cleaning: warehouses, industrial facilities, parking structures, food processing plants, institutional buildings, and commercial properties. The zero-VOC, non-flammable, non-toxic formulation makes it safe for use in occupied facilities and food-adjacent environments.

FACILITIES AND MAINTENANCE MANAGERS

How does routine cleaning with the 3000 protect a sealer investment?

Moxie penetrating sealers are long-term investments in substrate protection — but their performance depends on the substrate remaining clean. Contaminants that accumulate on sealed surfaces over time — biological growth, atmospheric deposits, petroleum spills, construction residue — can create conditions that compromise surface integrity and eventually challenge the sealer itself. Periodic cleaning with Moxie Shield 3000 Concrete & Masonry Cleaner removes these contaminants without damaging the sealed surface, maintains the appearance of the masonry, and ensures the sealer continues to perform at its rated level. It will not harm the concrete or degrade the sealer when used correctly.

FACILITIES AND MAINTENANCE MANAGERS

Is it safe for use in food processing environments?

Yes. Moxie Shield 3000 Concrete & Masonry Cleaner is USDA approved for use in food processing areas and complies with OSHA 29 CFR 1910. The zero-VOC, non-toxic, non-hazardous formulation means it will not introduce airborne contaminants or toxic residues into food processing environments. Rinse thoroughly after use to remove all cleaner residue before resuming food processing operations. The product's non-flammable profile also makes it appropriate for facilities where flammable cleaners are restricted.

FACILITIES AND MAINTENANCE MANAGERS

What packaging formats are available for facility maintenance programs?

Moxie Shield 3000 Concrete & Masonry Cleaner is available in 1-gallon pails, 5-gallon pails, 55-gallon drums, and 275-gallon totes — suitable for everything from spot maintenance to facility-wide cleaning programs. Contact Moxie's sales team at (844) 845-1975 or sales@moxieinternational.com to discuss volume pricing and maintenance program supply logistics.

Questions for Owners

Why surface preparation matters, what the 3000 does, and how it protects your sealer investment.

OWNERS

Why is surface preparation necessary before applying a penetrating sealer?

Every Moxie penetrating sealer works by penetrating the substrate's pore structure and reacting chemically within it. If the pores are blocked by oil, grease, efflorescence, laitance, dirt, or construction residue, the sealer cannot penetrate — and a sealer that cannot penetrate cannot protect. Applying a penetrating sealer over a contaminated surface produces a failed application: shallow penetration, uneven protection, and visible surface defects. The 3000 removes those obstructions and restores the substrate to a clean, absorptive condition — which is the foundation every effective sealing project requires.

OWNERS

What contaminants does Moxie Shield 3000 Concrete & Masonry Cleaner remove?

Moxie Shield 3000 Concrete & Masonry Cleaner is documented to remove oil and grease, efflorescence and alkali salt deposits, surface dusting and laitance, atmospheric contaminants, dirt and construction residue. Its alkaline chemistry is particularly effective on petroleum-based contamination — service station forecourts, garage floors, loading docks, and industrial areas where oils and greases are common maintenance challenges. For heavy efflorescence on brick, masonry, or concrete, the 3000 is the appropriate pre-treatment before applying the corresponding Moxie sealer.

OWNERS

Will it damage the concrete or masonry surface?

No. Moxie Shield 3000 Concrete & Masonry Cleaner will not harm concrete or masonry surfaces when used as directed. Unlike acid cleaners that etch and weaken the substrate, the 3000's alkaline chemistry lifts and suspends contaminants without attacking the silicate matrix of the concrete or stone. It leaves no film or residue when rinsed, and restores the natural appearance of the surface. It is documented as environmentally responsible — zero VOC, non-toxic, non-flammable, and USDA approved for food processing environments.

OWNERS

Can it be used on its own, or is it always a pre-treatment step?

Moxie Shield 3000 Concrete & Masonry Cleaner is effective as a standalone maintenance cleaner for ongoing facility cleaning — removing periodic contamination, restoring surface appearance, and maintaining the condition of already-sealed or unsealed masonry and concrete. It does not need to be followed by a sealer application every time. For initial sealing projects or re-sealing after a maintenance cycle, it functions as the mandatory pre-treatment that prepares the substrate for optimal sealer penetration. Both uses are valid and the product is formulated to perform in either context.

Questions for Specifiers

Specifying pre-treatment cleaning in masonry and concrete sealing sequences — where the 3000 belongs in the specification.

SPECIFIERS

Which CSI division and section does Moxie Shield 3000 Concrete & Masonry Cleaner fall under?

Moxie Shield 3000 Concrete & Masonry Cleaner is specified under Division 03 — Concrete, within sections covering concrete surface preparation and treatment, and under Division 04 — Masonry, within sections covering masonry cleaning and maintenance. For restoration projects, it may appear under Division 04 01 00 (Maintenance of Masonry) as a pre-treatment step before water repellent application. It may also appear in Division 07 — Thermal and Moisture Protection project specifications as the specified cleaner preceding penetrating sealer application. Moxie's technical team can provide application-specific specification language.

SPECIFIERS

How should the 3000 be sequenced in a specification that also includes a Moxie penetrating sealer?

Specify Moxie Shield 3000 Concrete & Masonry Cleaner as a mandatory pre-treatment step in the same specification section as the penetrating sealer. The sequence is: (1) surface repair of all cracks and defects, (2) cleaning with Moxie Shield 3000 Concrete & Masonry Cleaner per application procedures, (3) thorough rinsing and complete drying, (4) Water Absorption Test to verify absorptivity, (5) application of the specified Moxie penetrating sealer. This sequence should be written as a complete system specification rather than separate products — the performance of the sealer is dependent on the quality of the preparation, and specifying them together establishes contractor accountability for both steps.

SPECIFIERS

What technical data supports inclusion in project submittals?

Available submittal documentation includes: product data sheet with full technical specifications (pH 12.30, specific gravity 1.02, VOC 0 g/L, flash point none), safety data sheet, VOC compliance documentation (EPA Method 24, VOC = 0), USDA food processing area approval, OSHA 29 CFR 1910 compliance, coverage rate data for general cleaning and heavy efflorescence conditions, and application procedures. All are available upon request from Moxie's technical team.

SPECIFIERS

Why specify an alkaline cleaner rather than an acid cleaner for pre-sealing preparation?

Acid cleaners are commonly specified for efflorescence removal but create significant risks in sealing sequences. Acid etches concrete and masonry surfaces — altering pore geometry, weakening the substrate surface, and leaving acid residue that can interfere with the chemical reaction of penetrating sealers. Alkaline cleaning at pH 12.3 achieves equivalent or superior removal of efflorescence, oil, and grease without attacking the substrate or leaving interfering residue. For specifications requiring penetrating sealer application after cleaning, alkaline pre-treatment is the technically correct choice and should be called out explicitly to prevent substitution with acid-based alternatives.

SPECIFIERS

Is Moxie Shield 3000 Concrete & Masonry Cleaner appropriate for historic preservation specifications?

Yes. The non-etching alkaline chemistry, no-residue rinsing performance, and zero-VOC formulation make Moxie Shield 3000 Concrete & Masonry Cleaner appropriate for historic masonry cleaning specifications where surface alteration is restricted and chemical sensitivity is a concern. It restores natural surface appearance without changing color or texture — which is the standard requirement for historic preservation cleaning work. For projects following Secretary of the Interior's Standards for preservation, the non-destructive, non-etching cleaning approach aligns with the prohibition on cleaning methods that damage historic materials.

SPECIFICATION SUPPORT

Documents available on request

Product Data Sheet
Full technical specifications and coverage rates

Safety Data Sheet (SDS)
Handling, pH 12.3 alkaline warnings, PPE requirements

VOC Compliance Documentation
EPA Method 24 — VOC = 0 g/L

USDA Food Processing Approval
Non-toxic, non-hazardous certification

OSHA 29 CFR 1910 Compliance
Workplace safety documentation

Application Procedures Sheet
5-step application and dwell time guide

Coverage Rate Guide
General cleaning vs. heavy efflorescence rates

Surface Compatibility Guide
Materials to protect during application

System Specification Language
3000 pre-treatment + Moxie sealer sequencing

Moxie Shield Sealer Selector
Matching cleaner to the appropriate sealer

Manufacturer's Guarantee
Quality and performance documentation

Project References
Construction, restoration, and maintenance applications