



MOXIE SHIELD 1800

CONCRETE WATERPROOFING ADMIXTURE

FREQUENTLY ASKED QUESTIONS

Architects · Engineers · Contractors · Producers · Owners · Specifiers



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PRODUCT OVERVIEW

Moxie Shield 1800 Concrete Waterproofing Admixture

Moxie Shield 1800 Concrete Waterproofing Admixture is a liquid integral admixture engineered to control moisture vapour transmission, water migration, and alkali efflorescence from within the concrete matrix. Designed for fresh concrete mixes, it protects above-grade and below-grade cementitious construction where long-term structural durability is critical.

Moxie Shield 1800 Concrete Waterproofing Admixture reacts during cement hydration to form an integral protective structure that eliminates capillary pathways within the concrete. Moxie-enhanced concrete demonstrates no detectable water transmission at pressures up to 200 psi, creating an impermeable substrate under demanding conditions. It increases compressive and flexural strength, resists chloride intrusion and sulfate attack, improves freeze-thaw durability, and protects reinforcing steel from corrosion.

50+ | 200 psi | Zero Failures | VOC = 0

Years in the field | Zero water transmission at 200 psi | Documented failures | EPA 24 certified

ARCHITECTS

Questions for Architects

Specification language, design flexibility, and project coordination.

ARCHITECTS

Can Moxie Shield 1800 Concrete Waterproofing Admixture be specified by CSI section, and does it satisfy waterproofing requirements in design documents?

Yes. Moxie Shield 1800 Concrete Waterproofing Admixture has a dedicated CSI Specification Sheet for straightforward inclusion in project specifications. It satisfies above-grade and below-grade waterproofing requirements across all cementitious construction types — slabs, walls, foundations, precast elements, and more. Because protection is integral to the concrete matrix, it can eliminate the coordination complexity of separate membrane or topical systems.

ARCHITECTS

Does it negatively affect concrete's finished appearance or design flexibility?

No. Moxie Shield 1800 Concrete Waterproofing Admixture does not alter the surface appearance of concrete. It is compatible with integral stains and color additives (note: color must be integral; topical color should be applied within a day or two). For decorative applications including stamped concrete, it actually improves workability and acts as a release aid — a functional bonus, not a constraint.

ARCHITECTS

Will it help us achieve LEED credits?

Yes. Moxie Shield 1800 Concrete Waterproofing Admixture is water-based, zero VOC, and contributes to LEED points. A dedicated LEED documentation sheet is available to support your submittal package.

ARCHITECTS

What does it replace in our typical detail assemblies?

Depending on the design, it can replace physical vapour retarders, waterproofing membranes, shrinkage-reducing admixtures, and hardeners and curing agents — dramatically simplifying wall section and slab detail coordination. Fewer products mean fewer trades, fewer interfaces, and fewer points of failure.

Questions for Engineers

Mechanism, test data, mix design, and structural performance.

ENGINEERS

What is the mechanism of action and how does it achieve impermeability?

Moxie Shield 1800 Concrete Waterproofing Admixture is an enhanced sodium silicate concrete densifier. During cement hydration it reacts within the matrix to form insoluble solids that fill and eliminate capillary voids — the primary pathways for moisture, chloride, and sulfate ingress. The result is zero detectable water transmission at pressures up to 200 psi. There are no membranes, coatings, or secondary systems involved.

ENGINEERS

How does it perform on chloride intrusion and rebar corrosion protection?

By eliminating capillary pathways, Moxie Shield 1800 Concrete Waterproofing Admixture prevents chlorides from reaching reinforcing steel — effectively eliminating the need for epoxy-coated rebar in most applications. Note: any exposed bar caps or ends remain temporarily shielded but should still be considered in corrosion-sensitive exposure conditions.

ENGINEERS

What ASTM testing has been completed, and what does it cover?

Moxie Shield 1800 Concrete Waterproofing Admixture meets the ASTM C494 specification as a Type S admixture. Supporting technical data includes freeze-thaw durability documentation, Tabor/Abrasion testing confirming densification, compressive strength, and project-specific mix design data. Technical data is available on request from the sales and engineering team.

ENGINEERS

What are the mix design constraints and how does it affect w/c ratio?

Maximum water/cement ratio is 0.52. Dosage rate is 11 oz. per 100 lbs. cwt of cementitious materials. The admixture replaces an equal volume of batch water. Compressive and flexural strength outcomes are mix-design dependent; higher strength results have been confirmed across documented projects. Consult Moxie's technical department for other mix design questions.

ENGINEERS

Does it affect thermal performance during cure?

Rather than increasing curing temperature, Moxie Shield 1800 Concrete Waterproofing Admixture decreases thermal transmission — creating a temporary thermal barrier that minimizes heat loss or gain during the curing period. This reduces the moisture differential between the top and bottom of slabs, which helps control curling.

ENGINEERS

Does it address ASR and plastic shrinkage cracking?

Yes. Moxie Shield 1800 Concrete Waterproofing Admixture shuts down the mechanism that causes Alkali Silica Reactivity (ASR) and reduces plastic shrinkage cracking caused by rapid surface evaporation — two of the most common long-term durability risks in reinforced concrete.

Questions for Contractors and Applicators

Installation, workability, and site simplification.

CONTRACTORS AND APPLICATORS

When and where is the admixture added — at the batch plant or on site?

Moxie Shield 1800 Concrete Waterproofing Admixture is added at the batch plant, replacing an equal volume of batch water. There is no on-site mixing, no secondary application step, and no additional labor once the mix is designed. It arrives in the truck, ready to place.

CONTRACTORS AND APPLICATORS

Will it affect pumpability or workability?

Positively. Moxie Shield 1800 Concrete Waterproofing Admixture acts as a pumping aid — lubricating the mix and reducing line pressure. The slump may appear lower by measurement (e.g. 3" to 3½" on the cone), but actual workability behaves like a higher 5" slump mix. The material is thixotropic, meaning it flows better under agitation. Finishing is easier, with reduced surface stickiness and more cohesive results.

CONTRACTORS AND APPLICATORS

Does it eliminate any of the separate products we'd typically apply?

Yes — in documented projects, Moxie Shield 1800 Concrete Waterproofing Admixture has eliminated the need for separate curing compounds, vapour retarder underlayment, and waterproofing membranes. Fewer products, fewer trades, cleaner sequencing.

CONTRACTORS AND APPLICATORS

Can it be used in marine environments or aquatically sensitive areas?

Yes. It is water-based with zero VOCs, making it compliant for use in environmentally sensitive zones. Moxie has documented success in fish hatchery construction — among the more demanding aquatic environments for concrete performance.

Questions for Concrete Producers

Batching integration, admixture stack, strength data, and sourcing.

CONCRETE PRODUCERS

How is Moxie Shield 1800 Concrete Waterproofing Admixture integrated into our standard batching process?

It is added at the batch plant in liquid form, substituted for an equal volume of batch water. No new equipment is required. Add Moxie Shield 1800 Concrete Waterproofing Admixture into the mixer with 20% of the batch water before adding other ingredients. Dosage is 11 oz. per cwt of cementitious materials. It is compatible with all forms of cementitious construction — precast, cast-in-place, slab-on-grade, slab-on-deck, and architectural concrete products.

CONCRETE PRODUCERS

How does it interact with our existing admixture stack?

Moxie Shield 1800 Concrete Waterproofing Admixture replaces vapour retarder admixtures, shrinkage-reducing agents, and curing admixtures — meaning it typically simplifies your admixture program rather than adding to it. Mix design consultation is available through Moxie's technical department.

CONCRETE PRODUCERS

What strength data exists, and how mix-design-dependent are results?

Strength outcomes are mix-design dependent. An ultimate strength increase should be expected. Cylinder compressive strength break histories from field batches — including Teichert data from 2015 — are available for technical review.

CONCRETE PRODUCERS

Where is Moxie Shield 1800 Concrete Waterproofing Admixture manufactured, and how do we source it?

Produced in Loomis, California. Contact the Moxie sales team at (844) 845-1975 or sales@moxieinternational.com to discuss supply, logistics, and batch plant onboarding.

OWNERS

Questions for Owners

Lifecycle value, cost-benefit, track record, and project types.

OWNERS

Why should we specify Moxie Shield 1800 Concrete Waterproofing Admixture on our project?

Concrete that fails from moisture infiltration — cracking, rebar corrosion, mold, flooring failure, structural degradation — is expensive to remediate and disruptive to operations. Moxie Shield 1800 Concrete Waterproofing Admixture makes the concrete itself the waterproofing system, protecting the entire mass of the structure rather than relying on surface coatings or membranes that can fail at seams, joints, or penetrations. That means lower lifecycle costs, longer intervals between major repairs, and infrastructure that performs for generations.

OWNERS

What is the cost-benefit case?

The net benefit is positive across all documented projects. Savings come from elimination of separate waterproofing products, reduced vapour barrier labor, simplified construction sequencing, and — most significantly — dramatically extended service life. A dedicated Cost-Benefit Analysis document is available to support your capital planning process.

OWNERS

Is this technology proven, and are there references?

Moxie has over 50 years of field performance with no documented failures across residential, commercial, industrial, civil, and public infrastructure projects. Applications include tunnels, bridges, dams, levees, airports, arenas, water retention structures, and pools. Project examples and references are available on request from Moxie's sales team at (844) 845-1975 or sales@moxieinternational.com.

OWNERS

Can it be used for water infrastructure, pools, or marine structures?

Yes. Moxie Shield 1800 Concrete Waterproofing Admixture is specifically engineered for environments where concrete must resist hydrostatic pressure, chloride exposure, and sustained moisture — making it ideal for water retention structures, pools, dams, levees, marine wharves, and waterfront infrastructure. It is zero VOC and safe for aquatically sensitive environments.

Questions for Specifiers

Specifiers carry the risk burden of every product on the schedule. These answers support defensible specification language.

SPECIFIERS

Is there a CSI-formatted specification section available, and which division does it fall under?

Yes. Moxie Shield 1800 Concrete Waterproofing Admixture has a dedicated CSI Specification Sheet formatted for Division 03 — Concrete. It is written to drop into Section 03 30 00 (Cast-in-Place Concrete) or equivalent sections for precast and specialty concrete applications. The specification language supports both prescriptive and performance-based approaches.

SPECIFIERS

How do I write a substitution-resistant specification around this product?

Moxie Shield 1800 Concrete Waterproofing Admixture is the only vapour-proofing admixture on the market — competing products reduce water and vapour transmission but do not achieve true impermeability. Specify zero detectable water transmission at up to 200 psi, elimination of capillary pathways, and ASTM C494 Type S compliance. Competitors who cannot demonstrate equivalent test performance cannot substitute. Moxie's technical team can provide model specification language.

SPECIFIERS

What independent testing and third-party documentation is available to defend the specification?

Available technical documentation includes: ASTM C494 Type S approval, freeze-thaw durability test data, Tabor/Abrasion testing, compressive strength break histories from field batches, and project-level performance records spanning 50 years. All documentation is on file and provided upon request.

SPECIFIERS

What does it replace, and how does that affect Division 07 and other spec sections?

Moxie Shield 1800 Concrete Waterproofing Admixture can replace physical vapour retarders and barriers (Division 07), waterproofing admixtures, shrinkage-reducing agents, and curing compounds. Specifying it as an integral admixture consolidates moisture protection into Division 03, potentially eliminating or simplifying related sections and reducing interface coordination risk.

SPECIFIERS

Is a performance-based specification possible, or must it be proprietary?

Both approaches are viable. A performance-based spec can call for: zero measurable water transmission at 200 psi, elimination of capillary voids via reactive silicate chemistry, ASTM C494 Type S compliance, and maximum 0.52 w/c ratio. Because no other product simultaneously meets all these thresholds, this effectively functions as a sole-source basis of design.

SPECIFIERS

Are there references from design professionals who have specified this product before?

Yes. Moxie can provide references from architects, specifiers, structural engineers, general contractors, and batch plants across residential, commercial, industrial, civil, and public infrastructure sectors. Project documentation is also available at moxie-intl.com/projects.

Documents available on request

CSI Specification Sheet

Division 03, Section 03 30 00 ready

ASTM C494 Type S Approval

Testing documentation

LEED Documentation Sheet

Point calculation and certification support

Safety Data Sheet (SDS)

Full ingredient and handling information

Freeze-Thaw Durability Data

Long-term performance testing

Tabor/Abrasion Test Results

Densification confirmation

Compressive Strength Break History

Teichert 2015 cylinder data

Cost-Benefit Analysis

Net positive ROI documentation

Project References

Architects, engineers, GCs, batch plants

UC Davis Project File

Curing compound elimination case study

Fish Hatchery Project File

Aquatically sensitive environment case study