

APPLICATION PROCEDURES



MOXIE SHIELD 1800

CONCRETE WATERPROOFING ADMIXTURE

VOLUMETRIC MIXING

MOXIE SHIELD 1800 Concrete Waterproofing Admixture can be proportioned in the mix water tank. Reduce the gallons of water by the gallons of MOXIE SHIELD 1800 Concrete Waterproofing Admixture added. Be sure to take into consideration the free moisture in the aggregates. Under dosing will produce unfavorable results.

MOXIE INTERNATIONAL ALWAYS RECOMMENDS TRIAL BATCHING

NEED MORE HELP?

Please contact our technical support experts at tech@moxieinternational.com or call (844) 845-1975.

BATCH PLANT & PLACEMENT PROCEDURES

IT IS HIGHLY RECOMMENDED THAT THE TECHNICAL DEPARTMENT BE CONTACTED PRIOR TO THE USE OF MOXIE SHIELD 1800 ADMIXTURE.

PRODUCT OVERVIEW

MOXIE SHIELD 1800 Concrete Waterproofing Admixture is a liquid chemical admixture for ready mixed concrete that converts the byproducts of cement hydration into a higher density cementitious material creating an impermeable substrate. Use MOXIE SHIELD 1800 Concrete Waterproofing Admixture to reduce water vapor migration through the concrete, resist acids and sulfate degradation, and protect internal steel from corrosion.

CONCRETE & SITE PREPARATION

All equipment should be appropriate and suitable in accordance with the requirements of ASTM C94 Specifications for Ready Mixed Concrete. Ensure all concrete is prepared and placed in accordance with ACI 304 Measuring, Mixing, Transporting and Placing Concrete.

BATCH PLANT MIXING PROCEDURES

Moxie International always recommends trial batching when using additional admixtures. If other admixtures are specified, please see Moxie Chemical Interactions Technical

Bulletin #18-103.

DOSAGE RATE

10 oz. per 94 lb sack of cement, or 10.64 oz per cwt (715 ml/100 kg) of cementitious materials (50 oz minimum per yd³). Include any other cementitious materials, such as fly ash, in the calculation. Field and laboratory tests show maximum benefits have been achieved at a recommended water-slump range of 3" to 3½" for standard concrete and 2" to 2½" for fly ash. Do not exceed a 0.52 w/(c+p) ratio regardless of slump. Higher water-slumps will result in increased slab drying time and permeability.

MIXING

1. Start with a clean mixer drum on the truck.
2. Pre-blend the proper amount of MOXIE SHIELD 1800 Concrete Waterproofing Admixture with a minimum of 20% of the batch water. In central mixing plants, MOXIE SHIELD 1800 Concrete Waterproofing Admixture may be pre-blended with the entire, weighed amount of water.

BATCH PLANT & PLACEMENT PROCEDURES (continued)

Reduce batch water gallons by the same amount of MOXIE SHIELD 1800 Concrete Waterproofing Admixture that was added.

3. Continue the batching process including cementitious materials, aggregates, remaining batch water, and other additives. Do Not Use chloride-based set accelerators.
4. There are no special cleaning procedures required for trucks returning to the plant, wash as usual.

ON-SITE CONDITIONS

5. **PROTECTION:** Ensure that fresh concrete is protected from rain, wind, direct sunlight and freezing temperatures.
6. **FINISHING:** If additional protection of surface moisture evaporation is needed, fog misting or an evaporation retardant/finishing aid may be applied per manufacturer instructions. For further questions refer to Moxie Engineering/Construction Considerations Technical Bulletin #18-102.
7. **CURING:** MOXIE SHIELD 1800 Concrete Waterproofing Admixture functions as a curing compound. To be eligible for the Moxie Shield Adhesion Warranty, curing compounds are not allowed. For further questions refer to Moxie Engineering/Construction Considerations Technical Bulletin #18-102.
8. **SLUMP:** Maximum benefits have been achieved maintaining a 3" to 3½" water-slump, or 2" to 2½" for fly ash mix designs.
9. **TEMPERATURE:** In harsh environments, follow ACI 305R Hot Weather Concreting and ACI 306R Cold Weather Concreting. During cool ambient temperatures, a non-chloride set accelerator may be used. Do Not Use chloride-based set accelerators.
10. **WORKABILITY:** Concrete may appear to be too stiff. It will, however, have the workability and finishing characteristics of a slump that is 1½" to 2" more than the tested slump. At the above w/(c+p) ratio there will virtually be no bleed water; inform finishers not to use bleed water as the primary indicator for finish timing. If there is any bleed water present, this indicates the water-to-cement ratio is too high, reduce the amount of water.
11. **PUMPING:** MOXIE SHIELD 1800 Concrete Waterproofing Admixture has characteristics of a pumping aid. There will be less line pressure in concrete pump.

NOTE: CONTACT THE MOXIE TECHNICAL DEPARTMENT (844) 845-1975 WITH ANY ADDITIONAL QUESTIONS. TAKE NECESSARY SAFEGUARDS AND PRECAUTIONS. PROVIDE ADEQUATE PROTECTION FOR FINISHED PRODUCT DURING THE FIRST 72 HOURS AGAINST FREEZING OR 7 DAYS IN HIGH TEMPERATURES.

PRECAST CONCRETE PROCEDURES

IT IS HIGHLY RECOMMENDED THAT THE TECHNICAL DEPARTMENT BE CONTACTED PRIOR TO THE USE OF MOXIE SHIELD 1800 ADMIXTURE.

PRODUCT OVERVIEW

MOXIE SHIELD 1800 Concrete Waterproofing Admixture is a liquid chemical admixture for precast concrete that converts the byproducts of cement hydration into a higher density cementitious material creating an impermeable material. Use MOXIE SHIELD 1800 Concrete Waterproofing Admixture to reduce water vapor migration through the concrete, significantly reduce efflorescence and cracking, resist acids and sulfate degradation, and protect internal steel from corrosion.

CASTING PREPARATION

All equipment should be appropriate and suitable in accordance with the requirements detailed in the Precast/Prestressed Concrete Institute (PCI) guidelines.

PRECAST MIXING PROCEDURES

Moxie International always recommends trial batching when using additional admixtures. If other admixtures are specified, please see Moxie Chemical Interactions Technical Bulletin #18-103.

DOSAGE RATE

15 oz. per 94 lb. sack of cement, or 16 oz. per cwt (1040 ml/100 kg) of cementitious materials (50 oz. minimum per yd³). Include any other cementitious materials, such as fly ash, in the calculation. Do not exceed a 0.52 w/(c+p) ratio regardless of slump. Reduce batch water gallons by the same amount of MOXIE SHIELD 1800 Concrete Waterproofing Admixture that was added.

MIXING

1. Start with a clean mixing drum.
2. For precast mixer configurations, MOXIE SHIELD 1800 Concrete Waterproofing Admixture should be pre-blended to the entire weighed amount of batch water. At a minimum, Moxie Shield 1800 Admixture should be pre-blended to at least 20% of the batch water. Reduce batch water gallons by the same amount of MOXIE SHIELD 1800 Concrete Waterproofing Admixture that was added.
3. Continue the batching process as per standard plant procedures, including cementitious materials, aggregates, remaining batch water, and other additives. Do Not Use chloride-based set accelerators.
4. There are no special cleaning procedures required for the concrete mixer, wash as usual.

PLANT SITE CONDITIONS

1. **PROTECTION:** Ensure that fresh concrete is protected from rain, wind, direct sunlight and freezing temperatures.
2. **FINISHING:** If additional protection of surface moisture evaporation is needed, fog misting or an evaporation retardant/finishing aid may be applied per manufacturer instructions. For further questions refer to Moxie Engineering/Construction Considerations Technical Bulletin #18-102.
3. **CURING:** MOXIE SHIELD 1800 Concrete Waterproofing Admixture functions as a curing compound. For further questions refer to Moxie Engineering/Construction Considerations Technical Bulletin #18-102.
4. **TEMPERATURE:** During cool ambient temperatures, a non-chloride set accelerator may be used. Do Not Use chloride-based set accelerators. Moxie Fastset50 Accelerator, is a non-chloride set accelerator and may be used to reduce set time. Consult the Fastset50 Accelerator Specification Data Sheet or Moxie International Technical Department for additional information and dosage.
5. **WORKABILITY:** Concrete may appear to be too stiff. It will, however, have the workability and finishing characteristics of a slump that is 1½" to 2" more than the tested slump. At the above w/(c+p) ratio there will virtually be no bleed water; inform finishers not to use bleed water as the primary indicator for finish timing. If there is any bleed water present, this indicates the water-to-cement ratio is too high, reduce the amount of water.
6. **PUMPING:** MOXIE SHIELD 1800 Concrete Waterproofing Admixture has characteristics of a pumping aid. There will be less line pressure in concrete pump.

NOTE: CONTACT THE MOXIE TECHNICAL DEPARTMENT (844) 845-1975 WITH ANY ADDITIONAL QUESTIONS. TAKE NECESSARY SAFEGUARDS AND PRECAUTIONS. PROVIDE ADEQUATE PROTECTION FOR FINISHED PRODUCT DURING THE FIRST 72 HOURS AGAINST FREEZING OR 7 DAYS IN HIGH TEMPERATURES. ALWAYS MANUFACTURE PRECAST CONCRETE WITHIN PRECAST/PRESTRESSED CONCRETE INSTITUTE (PCI) GUIDELINES.