



Vapourproofing Concrete. Strengthening Foundations.

MOXIE SHIELD 1800 ADMIXTURE PRECAST PROCEDURES



NEED MORE HELP?

Please contact our technical experts at tech@moxieshield.com or call (888)-550-7998

It is recommended that the Technical Department be contacted prior to the use of Moxie Shield 1800 Admixture.

PRODUCT OVERVIEW

Moxie Shield 1800 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 substrate. Use Moxie Shield 1800 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: 10-15 oz per 94 lb sack of cement, or 10.64-15.96 oz per cwt (692-1038 ml/100 kg) of cementitious materials (50 oz minimum dosage per yd³). Include any other cementitious materials, such as fly ash, in the calculation. Do not exceed a .52 w/(c+p) ratio regardless of slump. Reduce batch water volume by the same amount of Moxie Shield 1800 Admixture that was added. Adequate aggregate and sand moisture must be maintained in order to control proper water/cement ratio. Contact the Moxie Technical Department for exact dosage recommendation based on individual mix design and application.

MIXING:

1. Start with a clean mixing drum.
2. For precast mixer configurations, Moxie Shield 1800 Admixture should be added to the entire weighed amount of batch water. At a minimum, Moxie Shield 1800 Admixture should be added to at least 20% of the batch water. Reduce batch water volume by the same amount of Moxie Shield 1800 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. Fly ash may be added to concrete at a maximum rate of no more than 20% replacement by weight of scheduled amount of cement when using Moxie Shield 1800 Admixture. Consult with the Moxie Technical Department when using any other supplementary cementitious materials (SCM) combinations in the mix design.
4. There are no special cleaning procedures required for the concrete mixer, wash as usual.



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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 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 Admixture has characteristics of a pumping aid. There will be less line pressure in concrete pump.

NOTE

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.