



Vapourproofing Concrete. Strengthening Foundations.

## **MOXIE SHIELD 1800 ADMIXTURE BATCH PLANT & PLACEMENT PROCEDURES**



### **VOLUMETRIC MIXING**

Moxie Shield 1800 Admixture can be proportioned in the mix water tank. Reduce the gallons of water by the gallons of Moxie Shield 1800 Admixture added. Be sure to take into consideration the free moisture in the aggregates and sand. Under dosing will produce unfavorable results.

### **MOXIE ALWAYS RECOMMENDS TRIAL BATCHING**

### **NEED MORE HELP?**

Please contact our technical experts at [tech@moxieshield.com](mailto: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 ready mixed 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.

#### **CONCRETE & SITE PREPARATION**

All equipment should be appropriate and suitable in accordance with the requirements of ASTM C94 Standard 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 (692 ml/100 kg) of cementitious materials (50 oz minimum per yd<sup>3</sup>). 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 .52 w/(c+p) ratio regardless of slump. Higher water-slumps will result in increased slab drying time and permeability. Adequate aggregate and sand moisture must be maintained in order to control proper water/cement ratio. Refer to the ASTM C94 Standard Specifications for Ready-Mixed Concrete. Contact the Moxie Technical Department for exact dosage recommendation based on individual mix design and application.

#### **MIXING:**

1. Start with a clean mixer drum on the truck.
2. Add the proper amount of Moxie Shield 1800 Admixture to a minimum of 20% of the batch water. In central mixing plants, Moxie Shield 1800 Admixture may be added to the entire, weighed amount of water. Reduce batch water volume by the same amount of Moxie Shield 1800 Admixture that was added.
3. Continue the batching process as per ASTM C94, 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 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 trucks returning to the plant,



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wash as usual.

### **ON-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. 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.
4. **SLUMP:** Maximum benefits have been achieved maintaining a 3" to 3½" water-slump, or 2" to 2½" for fly ash mix designs.
5. **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. Moxie Fastset50 Accelerator is a non-chloride set accelerator and may be used to reduce set time. Refer to the Fastset50 Accelerator Dosing Procedures or Moxie International's Technical Department for additional information and dosage.
6. **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.
7. **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.**