



Vapourproofing Concrete. Strengthening Foundations.

MOXIE SHIELD 1800 ADMIXTURE TECHNICAL BULLETIN - #18-101

MIX DESIGN CONSIDERATIONS



Michael Kelley
R&D Engineer

Have more questions?
Please contact our
technical experts at
tech@moxieshield.com
or call 916.251.0827

MIX DESIGN ADJUSTMENTS, SUPPLEMENTARY CEMENTITIOUS MATERIALS, WATER TO CEMENTITIOUS MATERIALS RATIO

Moxie 1800 Admixture is compatible with all other admixtures with the exception of calcium chloride set accelerators. Dose other admixtures separately according to manufacturers procedures.

1. MIX DESIGN ADJUSTMENTS

There are no specific adjustments required for the mix design. Simply subtract the amount of water equal to the amount of Moxie 1800 Admixture to be used in the mix design.

2. SUPPLEMENTARY CEMENTITIOUS MATERIALS

The benefits of fly ash and ground granulated blast furnace slag are substantially enhanced with the use of Moxie 1800 Admixture. Compressive strength is increased, less water is required, plasticizer is reduced and shrinkage cracking is reduced or eliminated. Recommended slump is 2½" to 3" maximum, however, do not exceed the water to cement ratio regardless of slump. Moxie always recommends trial batching for quality assurance.

3. WATER TO CEMENTITIOUS MATERIALS RATIO

Moxie recommends the water to cementitious materials ratio of the mix design to be between 0.42 to a 0.52. The slump may be increased provided water to cement ratio does not exceed specified mix design. Moxie 1800 Admixture requires approximately three additional days after complete hydration of the slab to complete its chemical process. Concrete placed with water to cementitious materials ratios greater than 0.52 will require longer concrete drying times. A higher water to cementitious materials ratio causes longer drying times which extend the time for flooring material installation. Additionally, comply with ASTM C94 for proper mix times when adding water, only up to the specified water/cement ratio, at the job site.

4. COMPRESSIVE STRENGTH

Moxie 1800 Admixture will not decrease the designed strength of any mix design. In fact, there will be a corresponding increase of strength relative to the decrease of capillary voids produced by the given water to cement ratio. Typical compressive strength increases of 10% - 40% or more may be achieved. Corresponding flexural strength increases will be realized as well.