



Vapourproofing Concrete. Strengthening Foundations.

MOXIE SHIELD 1800 ADMIXTURE TECHNICAL BULLETIN - #18-103

CHEMICAL ADMIXTURE INTERACTIONS

WATER REDUCERS, SET ACCELERATORS, AIR-ENTRAINMENT, CORROSION INHIBITORS

1. WATER REDUCERS

All water reducers are compatible when dosed separately. Low-range water reducers may not be necessary with the use of Moxie 1800 Admixture, as the water demand may well be reduced by 5% to 8%. Start with half the normal dosage of the water reducer and adjust accordingly.

2. SET ACCELERATORS

Moxie 1800 Admixture will slightly accelerate the set time of a concrete mix. All current non-chloride set accelerators in the industry are compatible with Moxie 1800 Admixture, provided they are dispensed separately. **Do not use Calcium Chloride set accelerators.**

3. AIR-ENTRAINMENT

Air entrainment may not be necessary as Moxie 1800 Admixture provides superior freeze-thaw resistance over air-entrained concrete. However, air-entrainment admixtures are compatible when added separately. Start with half the normal dosage and adjust accordingly.

4. CORROSION INHIBITORS

Moxie 1800 is a corrosion inhibiting Admixture. It forms a passive corrosion inhibiting barrier initially, and eventually forms a permanent, cementitious, corrosion inhibiting barrier. Furthermore, the impermeable nature of the concrete prevents the ingress of chloride ions. Calcium nitrite, the chemical category of a typical corrosion inhibiting admixture forms the same passive barrier around the reinforcing steel as does the Moxie 1800 Admixture. However, in order for calcium nitrate admixtures to achieve the same high level of corrosion resistance as Moxie 1800 Admixture, the dosage of calcium nitrate admixture would need to be substantially increased, making this type of corrosion inhibiting admixtures cost prohibitive. Additionally, the most important aspect is to completely restrict the penetration of any chloride ions. Continual leaching of soluble compounds, including chloride ions, weakens the concrete and in turn produces additional permeability which exacerbates the corrosion of reinforced concrete. The impermeable nature of the concrete, when treated with Moxie 1800 Admixture, does not allow any leaching of the concretes components when exposed to water or high humidity.



Michael Kelley
R&D Engineer

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