



DESCRIPTION:

MOXIE 1800 SUPER-ADMIX is a ready-to-use, non-toxic, clear, odorless, liquid admixture of specifically engineered and formulated compounds of a complex catalytic agent and active enzymes. These complex, hydrous silica, pozzolanic compounds react in a time-released fashion prior to, during, and after hydration, with the calcium hydroxides and by-products, to form additional cementitious materials. **The additional cementitious materials, by their very chemical and physical nature, produces concrete with a much higher density and surface hardness, a dramatic increase in bond, flexural, tensile and compression strength, and achieve a near-zero capillary void state.** A pozzolan, usually without exception, requires additional mixing water to maintain a given slump, and the drying shrinkage contraction of the hardened concrete increases, thus having a much greater tendency toward curling and cracking. However, the presence of these complex compounds produce all of the advantages of a pozzolan with none of the disadvantages. The result is a much higher quality concrete with far superior characteristics in all aspects.

SETTING CHARACTERISTICS:

PRIOR to surface set, the initial phase of chemical reactions taking place create colloidal gels, instead of the typical bleed water, preventing internal segregation and after initial set, allow for immediate or almost immediate finishing. At initial surface set the gel-like character of the concrete acts like a thermal barrier that restricts rapid evaporation of the surface water which prevents shrinkage and slab curl, thereby eliminates plastic cracks. These colloidal gels also protect the reinforcing steel from internal corrosion and will form additional cementitious materials that provide further protection from externally caused corrosion.

DURING the critical three to seven day period after placement, and throughout the process of hydration, this thermal barrier will continue to compensate for shrinkage by creating a stable and controlled environment which conserves the heat generated by hydration in low ambient temperatures and reduces the amount of heat absorption in high ambient temperatures. Therefore this thermal barrier is, to a great extent, able to compensate for variations in temperature, wind, extended or even temporary zero mix times as a result of equipment failure. However, maximum performance will always be achieved when the standard safeguards and precautions are taken.

AFTER the concrete hydration process is complete, at the 28 day period, the final stages of the initial phase take place and the colloidal gels react with what would usually be the remaining by-products and FREE mix water to form the last of the cementitious materials. This timed-release process takes approximately an additional 31 days to complete its' initial phase and the continuing process will become complete when all the calcium hydroxides and by-products of hydration have formed additional cementitious materials. The process takes place prior to, during, as well as after the final stages of hydration producing the maximum increase in strength and decrease in permeability.

The absence of voids also means that the excess of free mix water typically present after hydration of the concrete has been eliminated, reducing the internal **FREE** humidity level that no corrosion can take place. It takes approximately 850 days, under controlled laboratory conditions, for the internal humidity of standard concrete to reach a point where it no longer corrodes the reinforcing steel. If not protected, expansion caused by corrosion during this period of time has already taken place creating pressure and the onset of structural cracks.

BENEFITS:

MOXIE 1800 SUPER-ADMIX produces the highest quality, for the given mix design, by enhancing the very chemical nature of the hydration process itself to produce consistent, uniform, and predictable concrete with the benefits of all of the following:

- Ⓞ Stops moisture migration above and below grade
- Ⓞ Increased Compression Strength (up to 177%)
- Ⓞ Increased Flexural Strength (up to 200%) or more
- Ⓞ Increased Surface Hardness (up to 200%) or more
- Ⓞ Vapor barrier
- Ⓞ Corrosion Inhibitor
- Ⓞ Shrinkage Compensating Thermal Barrier
- Ⓞ Pumping-quality mix
- Ⓞ Plasticizer
- Ⓞ Accelerator
- Ⓞ Curing agent
- Ⓞ Dust proofing compound
- Ⓞ Finishing aid
- Ⓞ Prevents Chloride Intrusion
- Ⓞ Reduces internal Chloride Ion levels



MOXIE 1800 SUPER-ADMIX has also shown to have an exceptionally high degree of resistance to:

- ⓪ Freeze-thaw
- ⓪ Surface scaling
- ⓪ Spalling and flaking
- ⓪ Oils, fats, solvents, and petroleum based products
- ⓪ Acids and sulfates
- ⓪ Chlorides and hydrogen sulfides
- ⓪ Rust, water-borne contaminant stains
- ⓪ Lichen, moss, and other accretions
- ⓪ Extreme abrasion

MOXIE 1800 SUPER-ADMIX is a fraction of the cost of many other alternatives. It is comparable to a sand/visqueen vapor barrier by itself, all the advantages of many admixtures in one product, with none of the disadvantages, and from a labor standpoint dramatically saves screed, float, finish, and form removal time, therefore can even increase profit.

APPLICATION:

MOXIE 1800 SUPER-ADMIX is added to a minimum 20% of the water, and mixed thoroughly, prior to the addition of the cement, aggregate, sand, and the remainder of the water (reduced by the amount of MOXIE 1800 SUPER-ADMIX). All Standard Specifications, precautions, and safeguards apply as to slump, water to cement ratio, mix/transport time, and weather/temperature conditions, as per the following standards: ASTM C94 Standard for Ready-mixed Concrete, ACI 304 - Recommended Practice for Measuring, Mixing, Transporting and Placing Concrete, ACI 305R - Hot Weather Concreting, 306R - Cold Weather Concreting, ACI 308 - Standard Practice for Curing Concrete.

TECHNICAL DATA:

Applicable Standards: MOXIE 1800 SUPER-ADMIX has been extensively field and laboratory tested for its effectiveness in applications, above and below grade (up 231 ft, 100 psi), of steel reinforced concrete, cast in place, specially placed, precast and lightweight concrete, as well as shotcrete, concrete masonry units, and concrete masonry mortar products. MOXIE 1800 SUPER-ADMIX has shown dramatically greater performance over untreated samples or designed mixes, when proper air content, water/cement ratio, water quality and recommended methods and procedures are strictly adhered to, according to the following ASTM and/or applicable standards or tests:

- ASTM D5084** - Standard Test for Permeability of Concrete
- ASTM D4263** - Standard Test Method for Indicating Moisture - Plastic Sheet Method
- ASTM C109** - Compression Strength
- ASTM C309** - Membrane Forming Curing Compounds - Performance Criteria
- ASTM C494** - Standard Specification for Chemical Admixtures for Concrete (C,E,&F)
- ASTM C78** - Flexural Strength of Concrete, Three Point Loading
- ASTM E96** - Water Vapor Transmission of Materials
- ASTM C156** - Water Retention by Concrete Curing Materials
- ASTM C157** - Shrinkage - Standard Test for Length Change
- ASTM C567** - Unit Weight of Structural Lightweight Concrete
- ASTM C666** - Freeze Thaw Resistance
- ASTM C805** - Test Method for Rebound Number of Hardened Concrete (Schmidt Hammer)
- NCHRP 244** - Modified Test for Chloride Intrusion (Stricter parameters)
- EPA** - API, DEA Assessment of the Toxicity of Dispersing Agent (Controls Marine life exhibited 100% survival)
- UDOT** - Laboratory for Testing Concrete Sealers, Chloride Intrusion, and Freeze-Thaw (two year study)

Additional Compliance: MOXIE 1800 SUPER-ADMIX has also been tested under, and is in full compliance with the parameters, procedures and specifications of the EPA, CARB, USDA, and various city, state, governmental, municipalities, architectural, engineer, geotechnical, and soils engineering requirements for vapor barrier equal, gas barrier, chloride intrusion, skid resistance, toxicity and VOC. content.

Test results, testimonials, and test procedures can be obtained from MOXIE International, Inc.



INSTALLATION:

MOXIE 1800 SUPER-ADMIX is available in a ready-to-use, liquid, that is added to the concrete mixer with a portion of the mix water. It is thoroughly distributed when blended at the standard speed and time. Minimal overmixing has no effect on the performance of MOXIE 1800 SUPER-ADMIX. Additional "creaminess" can be achieved by allowing the freshly mixed concrete to set, undisturbed for approximately 10 minutes, set time will be unaffected.

SUPPORT:

Technical and product services support is available through our 800 number, 8:30 A.M. to 5:00 P.M., Pacific Time, Monday through Friday. During the initial phase of a major project, a technical product services representative will be available on-site for the first consecutive 24 hour period, if necessary. Twenty four hour telephone technical product services support can be arranged when necessary. If additional field support is requested, this support is available at a minimal charge.

WARRANTY:

MOXIE International Inc., will warranty MOXIE 1800 SUPER-ADMIX, for a period of 20 YEARS, to stop moisture and vapor migration, prevent alkali and efflorescence attack, prevent corrosion of reinforcing steel, and to perform as stated in current published documentation, brochures, and company literature, within the given variances, and supported by field, laboratory, and customer test results, data and testimonial letters, when used by licensed contractors, and **MUST** be used in **STRICT** accordance with current documented policies, procedures, standards and tests provided and recommended by ASTM, ACI, Uniform Building Code, Architectural Specifications, and MOXIE International Inc.. Deviation of these established policies, procedures, standards and tests, including but not limited to proper air content, maximum water/cement ratio, water quality, chemical composition of portland cement, as well as soil conditions at time of placement, aggregate/sand moisture content, and products or admixes known to inhibit the effectiveness of MOXIE 1800 SUPER-ADMIX will void the warranty. MOXIE International Inc. shall only be responsible to provide enough product to resolve said situation, not including labor, and will not be held responsible for liquid, incidental and/or consequential damages, structural cracks, or damage and conditions caused by neglect, abuse, acts of GOD, other materials and/or conditions resulting from inferior application or workmanship, whether intentional or not, or situations beyond our control. MOXIE International Inc. reserves the **FIRST RIGHT** to determine the cause of the circumstances or condition by any current accepted test method or procedure available according to concrete institutions or concrete associations, ASTM, ACI, Uniform Building Code, Architectural Specifications, and MOXIE International, Inc., only, and **MUST** be provided with any and all test data available when requested. **NO OTHER TEST METHODS SHALL BE ACCEPTABLE. A 10 YEAR, LABOR & MATERIALS, REGISTERED PROGRAM IS AVAILABLE.**