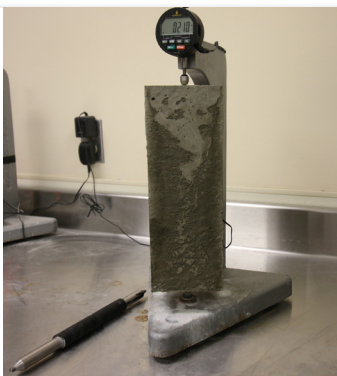




SHRINKAGE COMPENSATING ADMIXTURE

CONEX[®]

EUCLID CHEMICAL



PRIMARY APPLICATIONS

- Flatwork concrete
- Bridge decks
- Parking structures
- Interior/exterior
- Walls/parapets
- Storage tanks
- Watertight construction
- Toppings
- Piers

FEATURES

- Expansion characteristics of CONEX allow for net length change reduction for concrete
- Use of CONEX does not cause any slump loss, and may be used in conjunction with other Euclid Chemical admixtures
- Will not effect mechanical strengths
- Compatible with the majority of Portland cements
- CONEX should not adversely effect freeze-thaw and salt scaling resistance, if an adequate air void system is provided

WHAT IS CONEX?

CONEX is a Type G component, dry powdered material that reacts with the hydration process of Portland cement to produce a calcium hydroxide platelet system, as specified in ACI 223. This platelet formation provides an early controlled expansion, which in turn reduces the overall net length change of the concrete. CONEX can function as a shrinkage reducing material when used at the lower rate of its suggested dosage range (2% to 5% by weight of cement). Shrinkage compensation is achieved when using CONEX at the higher rate of the recommended dosage range (5% to 10% by weight of cementitious).

When used correctly, this early expansion is enough to compensate for typical shrinkage which will be experienced within the concrete pore structure, resulting in greatly reduced overall net length change of concrete. The reaction of CONEX is generally complete within the first 24 hours after exposure to water. For this reason, a modified version of ASTM C157 must be used. The specimens must be demolded with an initial reading taken 12 hours after exposure to water. If the initial length change reading is delayed, the shrinkage results will appear as though the product did not perform. CONEX should be used when shrinkage requirements demand shrinkage reduction of greater than 50% when compared to reference concrete of the same design and materials.

PERFORMANCE FACTS

- Total net length change is reduced
- Expansion process is not through an ettringite mineral formation
- CONEX does not effect workability, air content, set time, or other characteristics of fresh concrete

Example chart from ACI 223R-10

