SPECIALTY ADMIXTURES

Master Format #: 03 30 00  03 40 00  03 70 00

# CONEX®

## SHRINKAGE COMPENSATING ADMIXTURE

EUCLID CHEMICAL

## PRODUCT INFORMATION

### PACKAGING

Packaged in 22 lb (10 kg) pulpable bags wrapped in an outer plastic bag, which must be removed

### SHELF LIFE

1 year in original, unopened package

### SPECIFICATION/COMPLIANCES

ANSI / NSF STD 61

ASTM C494 Type S

### TECHNICAL INFORMATION

**pH:** ~ 12.5 to 13
**Color:** beige
**Specific Gravity:** ~ 3.13 to 3.16

## DESCRIPTION

CONEX is a powdered admixture used for compensation and total overall reduction of net shrinkage for Portland Cement concrete. Its functional mechanism is based on the formation of an expansive component. CONEX is an expansive Type G component, which produces a calcium hydroxide platelet crystal system, as specified in ACI 223. CONEX contains no added chlorides or chemicals known to promote the corrosion of steel.

## PRODUCT CHARACTERISTICS

### FEATURES & BENEFITS

- Expansion with CONEX allow for net shrinkage reduction for concrete
- Use of this admixture does not cause any slump loss and may be used in conjunction with other Euclid Chemical admixtures
- Will not affect strengths and is compatible with the majority of Portland cement types
- CONEX does not affect the air content, set time, or other characteristics of fresh concrete
- The addition of CONEX should not adversely affect freeze-thaw and salt scaling resistances given that an adequate air void system is provided
- Expansion process is not through ettringite formation

### PRIMARY APPLICATIONS

- Flatwork concrete
- Bridge decks and Parking structures
- Interior / Exterior
- Arena / Artificial skating rinks
- Walls / Parapets / Storage tanks
- Watertight construction
- Toppings
- Piers

## PRECAUTIONS/LIMITATIONS

- The use of this product requires a minimum 48 hour wet curing period, with maximum performance obtained after a 7 day curing period. For optimal moist curing efficiency, the use of curing blankets is recommended.
- As soon as the moist curing period is finished, it is recommended to use a curing compound provided by Euclid Chemical
- Preliminary trials should be done to determine the optimum dosage and to ensure CONEX is well dispersed.
- CONEX is sensitive to humidity, free water, $CO_2$ and should be stored and handled in the same manner as Portland cement. Keep in perfectly sealed, original package and in a dry location and remove outer plastic bag before use.
- In all cases, consult the Safety Data Sheet before use.
- In all cases, preliminary testing is recommended to determine dosage and to ensure that CONEX is dispersed efficiently.

## TECHNICAL INFORMATION

**Test Methods used to evaluate CONEX:**

- ASTM C878
- ASTM C157 modified in accordance with Technical Bulletin AD-06
- Embedded vibrating strain gauges

For more information please contact your Euclid Technical Sales Representative.

## DIRECTIONS FOR USE

- For best results, use CONEX in concrete with the W/C (water to cement ratio) lower than 0.60.
- CONEX should not be added to the concrete mixture after the cementitious ingredients have been introduced and should not be added directly to the ready-mix concrete truck after the concrete is loaded.
- CONEX can be used in drum mixed and central batched concrete applications. The bags of CONEX must be introduced into the mixer up front JUST before loading the materials. This allows the water to properly moisten the bags and to properly break up and disperse the bags through the grinding effect of the coarse aggregates. Cementitious materials should be introduced at least 60 seconds after the CONEX addition.
- CONEX is packaged pulpable bags; however, they are wrapped in an outter plastic bag, which must be removed before use.
- Concrete containing CONEX should be mixed a minimum of 10 minutes, at normal mixing speed, after all concrete constituents have been batched to ensure thorough dispersion of all materials.
- Concrete treated with CONEX may be finished and placed in the same fashion as conventional concrete.
- Typical dosage rate of 2-10% bwoc (by weight of cementitious). Before use, test in accordance with ACI 223 to determine the correct dose needed.
- The safety of the operator needs to be considered when the CONEX is handled.

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