



EUCLID CHEMICAL

CONEX®

SHRINKAGE COMPENSATING ADMIXTURE

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.

PRIMARY APPLICATIONS

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

FEATURES/BENEFITS

- The expansion characteristics of 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 the mechanical strengths
- It is compatible with the majority of Portland cements
- 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

TECHNICAL INFORMATION

Material properties tested under laboratory conditions @ 25°C, 50% RH

Property	Test Method	Values at 25° C
Components	-	Single
Appearance	-	Free flowing powder
Colour	-	Beige to Light Grey
Bulk Density	-	0.85 ± 0.05 g/cc
pH	-	12 – 13

Expect reasonable variation under field conditions.

Test Methods used for evaluation: ASTM C878, ASTM C157

Specification complies: ASTM C494 Type S

PACKAGING

CONEX is packaged in a 5 kg plastic bag.

SHELF LIFE

12 Months if stored between 15°C to 30°C

DOSAGE

Typical dosage rate of 2-10% bwc (by weight of cementitious).

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 CONEX ingredients and to properly break up disperse the CONEX through the grinding effect of the coarse aggregates. Cementitious materials should be introduced at least 60 seconds after the CONEX addition.

CONEX is packaged in PE bags, 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% bwc (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.

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 from Euclid range.
- Preliminary trials should be done to determine the optimum dosage and to ensure CONEX is well dispersed.
- CONEX is sensitive to humidity, free water, and to CO², and should be stored and handled in the same manner as Portland cement. Keep in perfectly sealed, original package and in a dry location.
- In all cases, refer to the Safety Data Sheet before use.

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