



ELEMENTS
QUÍMICA APLICADA

E5 AI

**Stabilizing admixture for
cement hydration**

Description

e⁵ AI is a specially designed admixture for concretes, mortars and pastes that will require prolonged retention of consistency. Its formula allows a stable and extended mix workability, without any significant effects on mechanical strength development. It's classified as an ASTM C 494 Type B and NMX-C-255-ONNCE-2013 admixture.

Benefits

- It is specially designed for concretes, mortars and pastes, that require workability retention.
- Improves concrete placement in warm climates.
- Allows extended transportation of fresh concrete.
- Concrete's mechanical strength is not affected.
- Its chemical composition allows a linear increase in setting times, in contrast with the exponential increase observed with other stabilizing admixtures.
- It is compatible with all other chemical admixtures developed.

Technical information

Specific gravity 1.14

Physical appearance: cinnamon colored translucent liquid

pH 7.9

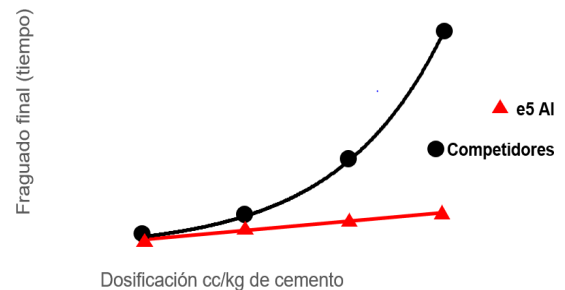
Presentation

19 L pail, 200 L drum and bulk

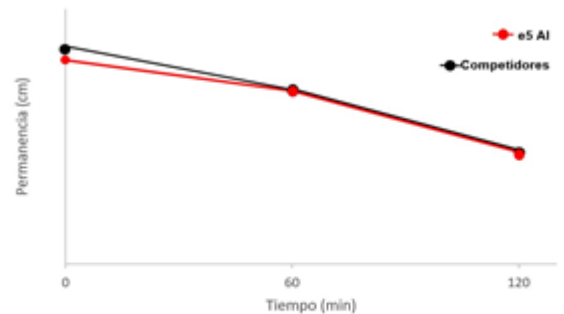
Useful life: 12 months in its original container

Performance evaluation

Results show that, at different e⁵ AI admixture dosages, no relevant setting time delays are observed.










The use of e⁵ AI admixture presents linear concrete setting times.



e⁵ AI permanence vs competitors
[\(acercar a la gráfica arriba\)](#)

Principal applications

-  Conventional concretes
-  Pumpable concretes
-  Concretes cast in warm climates
-  Self consolidating concretes
-  High mechanical strength concretes
-  Concretes mixed with condensed silica fume
-  Shotcrete that, in its fresh state, requires long freight times, in combination with our **e⁵ SHOT AFL** accelerator

Directions for use

We recommend running lab tests with the job materials for better results. This allows performing all the necessary adjustments in the concrete mix, such as: appearance, workability, consistency, air content, yield, setting times and the admixture dosage.

Then, it is important to repeat these tests under real job conditions (humidity, temperatura, time to transport fresh concrete etc.), for the purpose of making the final adjustments.







Load all the mix design materials: aggregates, cement and 80 % of the mix water. Allow these materials to mix during 2 minutes. Then add the established volume of admixture with the remaining 20 % of the mix water and finish the mixing process.

The dosage is a function of the required application, as well as the job's environmental conditions. We recommend working in the range of 0.5 to 6 mL/kg of cement.

Consult with your **Element5 Technical Solutions Advisor**, for the preparation of durable hybrid concretes, with an important economic benefit.

Please contact the **Element5 Technical Department** for any doubts or comments.

Cautions

-  The overdose of stabilizing admixtures can cause delays in the speed of hydration of cement.
-  When mixed with lignosulfonate based admixtures, it is necessary to control the dosage to avoid setting time delays.
-  Check the dosage, in combination with retarding admixtures, to control the dose and avoid setting time delays.
-  In the event of low ambient temperatures, and consequently low concrete temperatures, it will be necessary to review the dosage, as this can cause setting time delays.
-  Perform tests in combination with other admixtures, to check their performance and their synergy. This is specially important with regards to air content and setting times.
-  Do not allow freezing of the product.

■ In the event of any important variation in materials (change of aggregates, cement, etc.), it is necessary to make the required adjustments in the dosage used.

■ Always keep the product in its original container.

■ Never add the admixture with the aggregates or to the cement, without its prior initial hydration. These actions will decrease the admixture's efficiency.

■ With SR cements and with a high C_2S content, with respect to traditional cements, as well as cements with a high addition of slag, it will be necessary to run previous tests. This will allow establishing the adequate dose in response to the established requirements, thus preventing setting time delays.



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División Químicos para la Construcción

Carr. Lago de Guadalupe No. 127 Int. 601,
Margarita Maza de Juárez, Atizapán de Zaragoza,
Estado de México, CP. 52926.

Tel. +52 55 2484 2236

contacto@element5.mx

www.element5.mx