



ELEMENTS[®]
QUÍMICA APLICADA

e⁵
PCE SUPER
A-CLAYS SR

**HYPERFLUIDIFYING,
RETARDANT AND
TOLERANT TO CLAYS
ADDITIVE**

DESCRIPTION

e⁵ PCE SUPER A-CLAYS SR is an admixture for concrete mixing. It's designed as a high range water reducer, and a retardant and superplasticizer. It's prepared using high tech polymers to achieve a high fluidizing capacity through its high power dispersion of cement particles. It is prepared specifically to interact with cement particles and break the flocculating of these. It improves the workability of the concrete mixes even if the aggregates are contaminated with clays.

It is a multifunctional high range water reducer, superplasticizer and clay inhibitor, it is high technology prepared only by **Element5**. It's produced with carefully designed and selected raw materials. It is formulated so it complies with these multifunctional requirements. It is prepared with dispersant, accelerator and rheology modifying polymers.

With its special formula it allows working with low water contents. This is shown through an increase in mechanical resistance of concrete, even at very early ages.

These characteristics allow us to ensure that the product counts with unique properties in the market. There are aggregates in the market that have a high clay content, these aggregates generate performance problems in the concrete mix, with or without the use of admixtures. This decreases its properties. To avoid these problems, the use of this product is recommended.

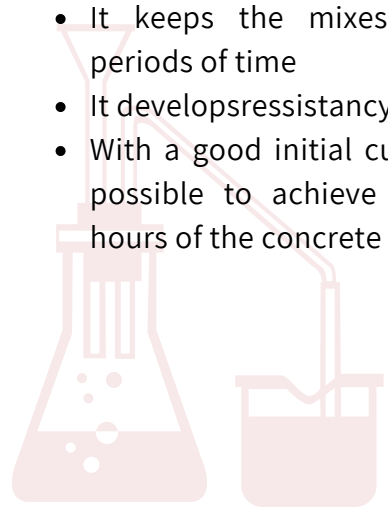
e⁵ PCE SUPER A-CLAYS SR allows high water reductions as high as 40%, and it generates high strengths at early ages. It widely meets of a F, F2 and type I admixture according to the NMX-C-255-ONNCCE, ASTM C-1017 and ASTM C-494. The setting times can be modulated as a function of the environmental conditions and the time the material are used.

BENEFITS

The use of **e⁵ PCE SUPER A-CLAYS SR** in concrete allows:

- Can be achieved with a high dispersion power in cement particles
- It inhibits the negative effects of clays contained in aggregates
- It keeps the mixes consistency for longer periods of time
- It develops resistance at early ages
- With a good initial curing of the specimens it's possible to achieve good strengths after 10 hours of the concrete being placed

- It increases tensile strength as well as compressive
- It reduces the permeability of concrete
- It reduces the manufacturing cost per m³ of concrete
- Saves up to half the dosage compared to additives of the same type when aggregates contain clays



TECHNICAL INFORMATION

- Specific gravity: 1.09
- Physical appearance: Amber colored turbid liquid

PRESENTATION

- 18 L bucket
- 200 L drum
- 1000 L Tote
- Bulk with mixing equipment

Useful life: 12 months in its original container

PRINCIPAL APPLICATIONS

e⁵ PCE SUPER A-CLAYS SR can be used for the production of the following concretes:

- High performance concretes that require retention of consistency
- Shotcrete, in combination with our accelerators with and without alkalies of the **e⁵ SHOT AF L** line
- Self consolidating concrete
- High mechanical strength concrete
- Concretes for prefab elements
- Concretes that require strength development at early ages

DIRECTIONS FOR USE

Load all the materials:

Following the established order, add the aggregates and the cement with 80 % of the mix water. Allow these materials to mix during 2 minutes. Then add the established volume of admixture along with the remaining 20 % of the mix water.

This will allow the calcium sulfate to form ettringite with the cement's tricalcium aluminate. This will improve the admixture's performance.

For concretes with a very low water / binding material ratio, lower than 0.32, after placing all the materials in the mixer it is necessary to allow a minimum mixing time of seven minutes.

For industrial production and looking to avoid an excessive effort of the concrete mixer, when the water / binding material ratio is lower than 0.32, half the established dosage of **e⁵ PCE SUPER A-CLAYS SR** can be added at the beginning, together with 80 % of the mix water. The other 50 % of admixture must be added with the remaining 20 % of the mix water at the end of the loading process. This procedure can decrease the formation of lumps. However, this will depend, to a large degree, on the physical state of the mixing blades.

Dosages can vary between 4 and 20 mL / kg of cement, and will depend on the concrete mix design and the degree of contamination (clays) in the aggregates.

An overdose, at the established conditions, can result in segregation.

For best results, it is recommended to implement good practices for the manufacture of special concrete, such as: preparation of aggregate batches, proper determination of the moisture content at different times of casting to make the necessary adjustments in the mixing water.

e⁵ PCE SUPER A-CLAYS SR can also be used at the job site to increase the consistency of the concrete mixes. The required dosages will be established based on prior testing.

In situations where it is necessary to increase the retention consistency, due to casting concrete in warm climates, lengthy transportation of fresh concrete, or due to the construction process, the use of our stabilizer **e⁵LS** o **e⁵AI** can be considered during the design stage.

This product should be stirred until a homogeneous mixture is obtained before use.

Consult your **Element5 Integral Solutions Advisor** for the preparation of durable concretes along with economic benefits.

For any questions of the use of the product, please contact the **Element5 Technical Support** Department.

CAUTIONS

- Do not allow freezing of the product
- Never add admixtures with the aggregates or to the cement, without its prior initial hydration, as these actions will decrease the efficiency of the admixture
- In the event of any important variation in materials (change of aggregates, cement etc.), it is necessary to perform the required adjustments in the established dosages
- It's not compatible with PNS admixtures
- Always keep the product closed in its original container, away from agents that could contaminate it. Do not damage the containers containing the product, as this may cause spillage. Consult the Safety Data Sheet (MSDS) before handling

Element5 Química Aplicada S.A. de C.V.

guaranties that the product meets the established quality and that it is exempt of fabrication problems.

When the product is outside it's established life, and it has been handled by the user, **Element5 Química Aplicada S.A. de C.V.** does not extend any type of additional warranty, as we have not control the present variables in the application or handling of the product.

The present document only contains general recommendations.

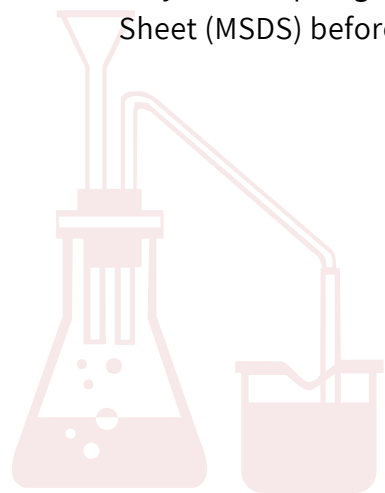
The technical interpretation that derives in specifications of our product is the user's responsibility.

That that is not written in this document and warranty is not contemplated.

If it's necessary to know in detail any data in reference to product or recommendations contact our **Element5 technical support**. Visit our website where our privacy statement is available for you.

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