



ELEMENTS
QUÍMICA APLICADA

e⁵ DRA GAMMA
Water reducing admixture



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Description

e⁵ DRA GAMMA is a water reducer, formulated with environmentally friendly dispersants. This is a high technology product designed specially to break the flocculating effect of cement particles as they come in contact with water.

It is designed to offset the set retarding effect of pozzolan bearing cements with traditional lignosulfonate based admixtures. It allows water reductions greater than 5 %. It complies widely as an ASTM C 494 Type A admixture.

Benefits

- It significantly increases the mechanical strength of concrete.
- Improves the rheological properties of concrete.
- It reduces the permeability of concrete.
- Reduces the water/binding materials ratio.
- It is adequate for concretes made in warm climates.
- Increases the durability of the concrete mixes.
- It is designed for cements with pozzolanic additions that retard setting times with conventional admixtures.
- Reduces the manufacturing cost per m³ of concrete.
- It is highly compatible with the **GUltra Reactive Ash** technology, for the preparation of greater durability, hybrid concretes that also offer important economic benefits.

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Technical information

Specific gravity 1.19

Physical appearance: dark brown liquid

Presentation

19 L pails, 200 L drums and bulk

Useful life: 12 months in its original container

Principal applications

- Durable hybrid concretes with the **GUltra Technology**
- Conventional concretes
- Pumpable concretes
- Structural concretes
- Concretes placed under water (in combination with our **e⁵ AWA (Anti Washout Admixture)** and **e⁵ SP 2000**)

Directions for use

Lab tests with the job materials are recommended to improve results and to allow all the necessary adjustments in the concrete mix, such as: appearance, workability, consistency, air content, yield, setting times and the admixture dosage.

It is important, then, to run these tests at an industrial level, under real job conditions (humidity, temperature, time required to transport fresh concrete, etc.) to allow making the final adjustments.

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Load all the mix design materials: aggregates, cement and 80 % of the mix water. Allow these to mix during 2 minutes. Then add the established volume of admixture with the remaining 20 % of the mix water. This will allow the calcium sulfate to form ettringite with the cement's tricalcium aluminate, thus improving the admixture's performance.

The dosage can vary from 4 to 10 mL/kg of cement, and will depend on the concrete's mix design. An overdose can result in a delay in the cement's speed of hydration.




When used in combination with an integral waterproofer, it is necessary to check the air content and setting times in the concrete mix.

Run tests in conjunction with other admixtures to check for admixture synergies, specially in air content and setting times.

It is compatible with all admixtures. In the event of important variations in the materials (change of aggregates, cement, etc.) it is necessary to make the required adjustments in the dosage used.

Consult with your **Element5-GUltra Integral Solutions Advisor**, for the design and preparation of durable hybrid concretes with an important economic benefit.

Cautions

-  Do not allow the product to freeze.
-  Always keep the product in its original container.
-  Never add the admixture to the cement without the cement's previous initial hydration. Do not add the admixture with the aggregates. These actions will lower the admixture's efficiency.

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