



**e<sup>5</sup> WRA 5 U**

Water reducer and retardant admixture

**ELEMENTS**  
QUÍMICA APLICADA

# e<sup>5</sup> WRA 5 V

## Description

e<sup>5</sup> WRA 5 V is a water reducer and retarding admixture manufactured with high technology polymers, specially designed to interact with cement particles, thus breaking their flocculating effect.

It also helps to control air content in concrete mixes. Water reductions above 5% can be achieved. It meets the requirements of ASTM C-494 admixtures.

## Benefits

- Increases concrete's mechanical resistance.
- Improves concrete's rheological properties.
- Allows adequate transportation of warm climate concretes.
- Reduces concrete's permeability.
- Reduces the water/binding agent relationship.
- Increases the durability of concrete mixes.
- Helps to reduce air content in concrete mixes.

## Principal applications

e<sup>5</sup> WRA 5 V can be used to produce the following concretes:

- Conventional concretes
- Pumpable concretes
- Structural concretes
- Concrete placed under water (in combination with our admixtures e<sup>5</sup> AWA (anti washout admixture) and e<sup>5</sup> SP 2000.

## Technical information

Specific gravity 1.20

Physical appearance: dark brown liquid

## Instructions for use

Lab testing is recommended to improve results with job materials and to allow making the necessary adjustments to the concrete mix, such as: appearance, workability, consistency, air content, yield, setting times and admixture dosages.

It is then important to repeat the tests under real job conditions (moisture, temperature, time to transport concrete, etc.) with the purpose of making the final adjustments.

Place all the materials: aggregates, cement and 80% of the design mix water in the mixer. Allow two minutes of mixing, then add the calculated volume of admixture with the 20% remaining volume of water. This will allow the calcium sulphate to form ettringite with the cement's tricalcium aluminate and thus improve the admixture's performance.

Dosages can vary from 4 to 9 cc/kg of cement, and will depend on the concrete to be used. An over dosage can give rise to a delay in the rate of hydration of the cement.

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

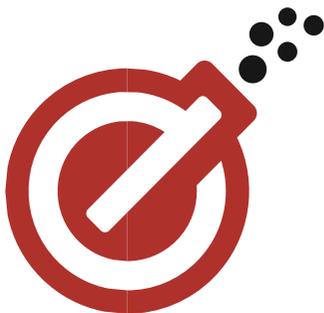
## Presentation

18 L pails, 200 L drums and bulk

Useful life: 12 months in its original container

## Cautions

- Over dosage of admixture can cause retardation in the cement's speed of hydration and an excessive air content.
  - Perform tests in combination with other admixtures to check the behavior of the admixtures' synergy, specially in air content and setting times.
  - It is compatible with all admixtures. Check compatibility with air entrainers.
  - Any important variation in materials (change of aggregates, cement, etc.) it is necessary to make the required adjustments in the dosages used.
- Do not allow the product to freeze.
  - Always store the product in its original container.
  - Never add the admixture on the aggregates or on the cement without its initial hydration because this will lower the admixture's efficiency.



**ELEMENT5**  
QUÍMICA APLICADA

**ELEMENT5** Química Aplicada S.A. de C.V. guarantees that the product complies with the established quality and is exempt of manufacturing defects, as long as the product is dated within the established expiration date. **ELEMENT5** Química Aplicada S.A. de C.V. does not extend any type of additional guarantee, given that we do not control variables present in the handling and application of the product. The present document only contains general recommendations. The technical interpretation that might derive in the specification of our products, is not contained in this document. What is not written in this document and guarantee is not contemplated. If it is necessary to know the details of any information in reference to the products or recommendations from which the described procedures are generated, please contact the **ELEMENT5** Química Aplicada S.A. de C.V. technical department and visit our web page where our privacy statement is presented.

Date of the last revision January 2017

**ELEMENT5**

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 | +52 55 5384 0203 | +52 55 3778 9384  
contacto@element5.mx  
www.element5.mx