

### PRODUCT DESCRIPTION

ESC™ 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. ESC™ is an expansive Type G component, which produces a calcium hydroxide platelet crystal system, as specified in ACI 223. ESC™ contains no added chlorides or chemicals known to promote the corrosion of steel.

### PRODUCT FEATURES

- The expansion characteristics of ESC™ 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 AFZIR Chemical admixtures.
- Will not affect the mechanical strengths. It is compatible with the majority of Portland cements.
- ESC™ does not affect the air content, set time, or other characteristics of fresh concrete.
- The addition of ESC™ 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.

### HOW TO USE

#### DOSAGE

- There is no standard dosage for AEA™ admixture. The exact quantity of air-entraining admixture needed for a given air content of concrete varies because of differences in concrete-making materials and ambient conditions. Typical factors that might influence the amount of air entrained include temperature, cementitious materials, sand gradation, sand aggregate ratio, mixture proportions, slump, means of conveying and placement, consolidation, and finishing technique. The amount of AEA™ admixture used will depend upon the amount of entrained air required under actual job conditions. In a trial mixture, use 16-260 mL/100 kg of cementitious material. Measure the air content of the trial mixture, and, if needed, either increase or decrease the quantity of AEA™ admixture to obtain the desired air content.
- In mixtures containing water-reducing or set-control admixtures, the amount of AEA™ admixture needed may be somewhat less than the amount required in plain concrete.

### APPLICATION

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



Expanding and Shrinkage Compensating Admixture - ESC™

### 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.
- Preliminary trials should be done to determine the optimum dosage and to ensure ESC™ is well dispersed.
- ESC™ is sensitive to humidity, free water, and to CO<sub>2</sub>, and should be stored and handled in the same manner as Portland cement. Keep in perfectly sealed, original package and in a dry location.
- Remove outer individually wrapped plastic bag before use.
- In all cases, consult the Safety Data Sheet before use.

### SHELF LIFE

1 year in original, unopened package.

### PACKAGING

is packaged in 10 kg pulpable bags wrapped in an outer plastic bag, which must be removed before use.

### DISCLAIMER OF LIABILITY

AFZIR, LLC warrants its products to be free from manufacturing defects. Buyer determines suitability of product for use and assumes all risks. Buyer's sole remedy shall be limited to replacement of product. Any claim for breach of this warranty must be brought within six months of the date of purchase.

AFZIR shall not be liable for any consequential or special damages of any kind, resulting from any claim or breach of warranty, breach of contract, negligence or any legal theory.

The Buyer, by accepting the products described herein, agrees to be responsible for thoroughly testing any application to determine its suitability before committing to production.