

# KingMix<sup>®</sup> 500ES

High performance early strength concrete hyperplasticiser.

## DESCRIPTION

KingMix 500ES is a high performance early strength concrete hyperplasticising admixture based on polycarboxylic polymers with long chains specially designed to enable the water content of the concrete to perform more effectively. This effect can be used in high strength concrete and flowable concrete mixes, to achieve highest concrete durability and performance.

## APPLICATIONS

- ▣ Improved cohesion allowing for use in mass concrete pours and piling.
- ▣ Structures with congested reinforcement.
- ▣ High strength and high performance concrete.
- ▣ Pre-cast concrete.
- ▣ Concrete block.
- ▣ Self-compacting concrete.
- ▣ Coloured masonry products.

## ADVANTAGES

- ▣ Higher early and ultimate compressive strengths.
- ▣ High density and impermeable concrete through extreme water reduction.
- ▣ Optimizes cement utilization.
- ▣ Minimizes segregation and bleeding problems by improving cohesion.
- ▣ Improves shrinkage and creep behaviors.
- ▣ Increases durability and resistance to aggressive atmospheric conditions thorough reduced permeability.

## COMPATIBILITY

KingMix 500ES can be used with all types of Portland cement and cement replacement materials. KingMix 500ES should not be used in conjunction with other admixtures unless KINGKRETE technical department approval is obtained.

## STANDARDS

KingMix 500ES complies with ASTM C494 Type, F & E, depending on dosage used.

## METHOD OF USE

KingMix 500ES should be added to the concrete with the mixing water to achieve optimum performance. An automatic dispenser should be used to dispense the correct quantity of KingMix 500ES to the concrete mix.

## TECHNICAL PROPERTIES @ 25°C:

Colour:	Light yellow liquid
Freezing point:	≈ -5°C
Specific gravity:	1.04 ± 0.02
Air entrainment:	Typically less than 2% additional air is entrained above control mix at normal dosages

## DOSAGE

The guidance dosage of KingMix 500ES is 0.4 to 4.0 litre per 100 kg of cementitious materials in the mix, including GGBFS, PFA or micro-silica.

Trials should be conducted to determine the optimum dosage of KingMix 500ES to meet the performance requirements by using the materials and conditions in actual use.

## EFFECTS OF OVER DOSAGE

Over dosing of KingMix 500ES will cause the following:

- ▣ Significant increase in retardation.
- Ultimate concrete strength will not be adversely affected and will generally be increased provided that proper concrete curing is maintained.

## CLEANING

KingMix 500ES can be washed with fresh cold water.

## PACKAGING

KingMix 500ES is available in 25 litre pails, 210 litre drums and 1000 litre bulks supply.

## STORAGE

Shelf life is 1 year when stored under cover, out of direct sunlight and protected from extremes of temperature.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult KingKrete's Technical Services Department.

## HEALTH AND SAFETY

As with all chemical products, care should be taken during use and storage to avoid contact with eyes,



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mouth, skin and foodstuffs. Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Reseal containers after use. Use in well ventilated areas and avoid inhalation

## NOTE

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local KingKrete representative. KingKrete Inc. reserves the right to have the true cause of any difficulty determined by accepted test methods.

## QUALITY AND CARE

All products originating from KingKrete's

manufacturing facilities are manufactured under a management system independently certified to conform to the requirements of the quality standard ISO 9001.

\* Properties listed are based on laboratory-controlled tests.

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#### STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this KingKrete Inc. publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

#### NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by KingKrete Inc. either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not KingKrete Inc. are responsible for carrying out procedures appropriate to a specific application.

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