

# KingMix<sup>®</sup> 450PC

High performance concrete admixture based on polycarboxylic polymers.

## DESCRIPTION

KingMix 450PC is a high performance superplasticising 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

- ☐ Self-compacting concrete.
- ☐ Structures with congested reinforcement.
- ☐ High strength and high performance concrete.
- ☐ Pre-cast concrete.
- ☐ Improved cohesion allow for use in mass concrete pours and piling.

## ADVANTAGES

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

## COMPATIBILITY

KingMix 450PC can be used with all types of Portland cement and cement replacement materials. KingMix 450PC should not be used in conjunction with other admixtures unless KINGKRETE Technical Department approval is obtained.

## STANDARDS

KingMix 450PC complies with ASTM C494, Type G and BS EN 934 part 2, table 11.1.

## METHOD OF USE

KingMix 450PC 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 450PC to the concrete mix.

## TECHNICAL PROPERTIES @ 25°C:

Colour:	Light yellow liquid
Freezing point:	≈ -3°C
Specific gravity:	1.09 ± 0.02
Air entrainment:	Typically less than 2% additional air is entrained above control mix at normal dosages
Chloride content:	Nil

## DOSAGE

The guidance dosage of KingMix 450PC is 0.5 - 2.0 litre/100 kg of cementitious materials in the mix, including GGBFS, PFA or micro-silica.

Representative trials should be conducted to determine the optimum dosage of KingMix 450PC to meet the performance requirements by using the materials and conditions in actual use.

## EFFECTS OF OVER DOSAGE

Over dosing of KingMix 450PC will cause the following:

- ☐ Significant increase in retardation.
- ☐ Increase in workability.

Ultimate concrete strength will not be adversely affected and will generally be increased provided that proper concrete curing is maintained.

## CLEANING

KingMix 450PC can be washed with fresh cold water.

## PACKAGING

KingMix 450PC 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.

® = Registered trademark of the KingKrete-Group in many countries.

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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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