



# KingMix<sup>®</sup> 40SP

High range workability retention concrete admixture.

## DESCRIPTION

KingMix 40SP is a high performance liquid concrete admixture formulated from selected polymers specially designed to enable the water content of the concrete to perform more effectively. This effect can be used to improve workability and to increase ultimate strengths by the very high levels of water reduction in the concrete mix. KingMix 40SP has strong workability retention which helps in long distance and hot weather concrete deliveries, and is particularly suitable for ready-mix concrete.

## APPLICATIONS

- ☐ To increase workability retention of fresh concrete.
- ☐ To provide increased ultimate strength by reducing water demand in concrete mixes.
- ☐ To produce high quality concrete of improved durability by reducing permeability.
- ☐ Long distance and hot weather concrete deliveries.

## ADVANTAGES

- ☐ Higher strength with same cement content.
- ☐ Minimising segregation problems by improving cohesion.
- ☐ Improved workability reduces placing and compaction problems.
- ☐ Cement saving without affecting strength.
- ☐ More durable concrete as a result of reduction in permeability and lower water to cement ratio.
- ☐ Chloride free.

## COMPATIBILITY

KingMix 40SP can be used with all types of Portland cement and cement replacement materials.

KingMix 40SP is compatible with other KINGKRETE admixtures used in the same concrete mix. If more than one type of admixture is to be used in the concrete mix, they must be dispensed to the concrete separately.

## STANDARDS

KingMix 40SP complies with ASTM C494, Type B, D and G, depending on dosage used.

## TECHNICAL PROPERTIES @ 25°C:

Colour:	Brown liquid
Freezing point:	≈ -2°C
Specific gravity:	1.14 ± 0.02
Chloride content: BS5075	Nil
Air entrainment:	Typically less than 2% additional air is entrained above control mix at normal dosages

## METHOD OF USE

KingMix 40SP 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 40SP to the concrete mix.

## DOSAGE

For normal strength concrete, a dosage between 0.80 - 1.75 litre/100 kg of cementitious materials in the mix, including GGBFS, PFA or micro-silica. For high strength concrete dosage between 1.0 - 2.75 litre/100 kg of cementitious materials in the mix.

## EFFECTS OF OVER DOSAGE

Overdosing of KingMix 40SP 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.

## SETTING TIME

Although the setting time is dependent on the dosage of KingMix 40SP, the following factors should be considered:

- ☐ Retardation is increased with lower levels of tri-calcium in the cement.
- ☐ Lower temperatures will delay the setting time.
- ☐ SRC cement gives higher retardation level than ordinary cement.
- ☐ Using more than one type of admixture in the same concrete mix could affect the setting time.
- ☐ Retardation level is increased when cement replacement materials are used in the concrete mix.



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## CLEANING

KingMix 40SP can be washed with fresh cold water.

## PACKAGING

KingMix 40SP 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, 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 Qatar facility 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.

## KingKrete-Qatar/KingMix\_40SP\_02/v2/07\_18

### 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.

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### 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.