

# KingAdd® 50RP

Retarding and water reducing admixture.

## DESCRIPTION

KingAdd 50RP is 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, to increase ultimate strengths or to facilitate a reduction in the cement content while sustaining and improving mix properties.

KingAdd 50RP has retarding properties; this effect can be used in concrete where high cement content or high temperatures are involved, or where extended setting time is required.

## APPLICATIONS

- ☐ Roller compacted concrete (RCC).
- ☐ Hot weather concreting.
- ☐ Where workability retention or retardation are required.
- ☐ To produce high quality concrete of improved durability and water tightness.

## ADVANTAGES

- ☐ Improved workability reduces placing and compaction problems.
- ☐ Workability retention for long distance concreting.
- ☐ Cold joints can be avoided by extending initial and final concrete setting time.
- ☐ Higher strength with same cement content.
- ☐ Cement saving without affecting strength.
- ☐ More durable concrete as a result of reduction in permeability and lower water to cement ratio.

## COMPATIBILITY

KingAdd 50RP can be used with all types of Portland cement and cement replacement materials. KingAdd 50RP is compatible with other KINGKRETE admixtures used in the same concrete mix. If more than one type of admixture is to be used in concrete mix, they must be dispensed to the concrete separately.

## STANDARDS

KingAdd 50RP complies with ASTM C494, Type B and D and with BS 5075, Part 1.

## METHOD OF USE

KingAdd 50RP 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 KingAdd 50RP to the concrete mix.

## TECHNICAL PROPERTIES

Colour:	Brown liquid
Freezing point:	-2°C
Specific gravity:	1.20 ± 0.01
Chloride content: BS 5075	Nil
Air entrainment:	Typically less than 2% additional air is entrained above control mix at normal dosages

## DOSAGE

The guidance dosage of KingAdd 50RP is 0.20 - 0.90 litre per 100 kg of cementitious materials in the mix, including GGBFS, PFA or microsilica.

Representative trials should be conducted to determine the optimum dosage of KingAdd 50RP to meet the performance requirements by using the materials and conditions in actual use.

## EFFECTS OF OVER DOSAGE

Over dosing of KingAdd 50RP 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 KingAdd 50RP, the following factors should be considered:

- ☐ Retardation is increased with a lower level 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.

## CLEANING

KingAdd 50RP can be washed with fresh cold water.

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## PACKAGING

KingAdd 50RP is available in 25 litre pails, 210 litre drums and 1000 litre bulks supply.

PROPERTIES	ASTM CODE	CONTROL MIX*	KINGADD 50RP				
KingAdd 50RP Dosage (kg/m <sup>3</sup> )		0.0	0.2	0.3	0.4	0.6	0.6
Flow/Slump (mm)	ASTM C143	200	210	190	205	200	190
Air Content by Pressure Method	ASTM C231	2.6	2.8	2.9	2.8	3.0	3.0
Initial Set (at 500 lb/in <sup>2</sup> ) (hr:min) at 25oC	ASTM C403	5.5	6.5	7.0	8.25	10.5	10.5

\*320 kg/ m<sup>3</sup>, CEM I 42.5 R, concrete temperature 20o

## 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 Middle East facility are manufactured under a management system independently certified to conform to the requirements of the quality standards ISO 9001, ISO 14001 and ISO 45001.

\* 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.