

KingMix[®] 100CN

Corrosion inhibiting admixture for reinforced concrete.

DESCRIPTION

KingMix 100CN is a calcium nitrite based concrete admixture which acts as a corrosion inhibitor for steel reinforced concrete. KingMix 100CN contains a minimum of 30% of calcium nitrite.

APPLICATIONS

- ☐ Recommended for all types of steel reinforced concrete that will be exposed to chlorides environments or deicing salts.
- ☐ To provide protection against corrosion in reinforced concrete.

ADVANTAGES

- ☐ Extends working life of reinforced concrete structures.
- ☐ Compatible with other admixtures.

PROPERTIES

KingMix 100CN provides protection to the steel reinforcement in concrete by interacting with the reinforcement steel at the contact surface with the concrete protecting the passivating layer and significantly delaying corrosion initiation and slowing down corrosion rate.

COMPATIBILITY

KingMix 100CN can be used with all types of Portland cement and cement replacement materials. KingMix 100CN 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

KingMix 100CN complies with ASTM C494, Type C.

METHOD OF USE

KingMix 100CN should be added to the concrete with the mixing water to achieve optimum performance.

Automatic dispenser should be used to dispense the correct quantity of KingMix 100CN to the concrete mix.

TECHNICAL PROPERTIES @ 25°C:

Colour:	Yellow liquid
Freezing point:	≈ -10°C
Specific gravity:	1.30 ± 0.01
Calcium nitrite content:	30%
Chloride content: BS5075	Nil
Air entrainment:	Typically less than 2% additional air is entrained above control mix at normal dosages

DOSAGE

The recommended dosage of KingMix 100CN is 7.5 - 30.0 liters/ m³ of concrete, depending on the chloride exposure conditions.

Table 1 can be used as guide to show the level of chloride protection at different dosages. KingMix 100CN water content should be included in W/C ratio calculation.

Dosage rate of Flocrete CN30 ltr./ m ³	Chloride kg/ m ³
10	3.5
12	4.7
15	5.9
17	6.8
20	7.7
22	8.3
25	9.2
30	9.4

SETTING TIME

- ☐ The presence of KingMix 100CN in the concrete mix will decrease the initial and final setting time.
- ☐ Trial mixes should be carried out to determine the effect of KingMix 100CN on setting time.
- ☐ KINGKRETE retarding admixtures can be used to prevent slump loss or finishing problems which may occur because of accelerating property of KingMix 100CN.
- ☐ KingMix 100CN can be used for cold weather concreting due to its set accelerating properties.
- ☐ Accelerating properties should be considered when scheduling concrete placement operations, particularly the mixing time, transportation time, compaction and presence of cold joints.

CLEANING

KingMix 100CN spillage should be collected with a suitable absorbent like sand or vermiculite and



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transferred into suitable containers. KingMix 100CN should not be allowed to enter sewers or open bodies of water.

If the spillages dried, the material is classified as ignitable waste.

Dispose of in accordance with local environmental regulations.

PACKAGING

KingMix 100CN is available in 25 liters pails, 210 liters drums and 1000 liters 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 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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