KingRep ® 100LS

One component medium build cementitious repair mortar.

DESCRIPTION

KingRep 100LS is a one component, polymer modified, cementitious repair mortar for use in hot climates. KingRep 100LS is mixed with water to produce a thixotropic mortar suitable for vertical and overhead application.

APPLICATIONS

- Repair of all types of structural concrete where high strength properties are required.
- For the repair of vertical and overhead elements without using form-work.
- As a repair mortar for all structural elements in buildings, water retaining structures, industrial plants, bridges, etc.

ADVANTAGES

- Specially formulated for use in hot climates.
- Easy to apply. Single component, requires only addition of water.
- Low permeability to water, providing excellent protection to steel reinforcement and host concrete.
- Thixotropic properties allowing extra high build for vertical and overhead applications.
- Suitable for internal and external application.
- Water vapour permeable.
- Contains no chlorides.

METHOD OF USE

Substrate Preparation

All damaged and weak concrete should be cut back to reach sound concrete and/or to a minimum depth of at least 10 mm.

Corroded steel reinforcement should be grit blasted to remove all rust traces. In case of significant loss in the steel reinforcement cross section, the steel should be replaced. Remove all concrete form around exposed steel reinforcements by 10 mm thickness. The perimeters of the repair area should be saw cut to a minimum depth of 10 mm.

The prepared area should be cleaned thoroughly by brush and/or compressed air.

Priming

All grit blasted steel reinforcements should be primed within 2 - 4 hours with one or two coats of zinc rich epoxy coating KingRep ZR.

TECHNICAL PROPERTIES

Compressive strength (wet cure): ASTM C109/109M-02	> 15 MPa @ 1 day > 40 MPa @ 28 days
Colour	Grey
Water absorption: BS 1881, Part 5 : 1970	0.20 ml/m^2/sec. @ 10 min 0.05 ml/m^2/sec. @ 2 hr
Rapid chloride permeability: AASHTO 277-93	< 500 coulombs
Tensile strength: BS 6319, Part 7 : 1985	> 2 MPa @ 28 days
Flexural strength: BS 6319, Part 3 : 1990	> 6 MPa @ 28 days
Mixing ratio:	4.5 litre of water for 25 kg bag of KingRep 100LS
Fresh wet density:	1.7 ± 0.1 g/cm^3
Drying shrinkage: ASTM C157	< 300 microstrain @ 7 days
Minimum application temperature:	5°C

Areas to be repaired with KingRep 100LS should be soaked with clean water before applying the repair mortar. All excess water should be removed prior to applying KingRep 100LS.

Mixing

To ensure proper mixing, a mechanically powered mixer or drill fitted with suitable paddle should be used. 4.5 litre of clean water should be added to clean container. The powder is then added slowly to the water while mixing continuously with low speed mixer/drill (400 - 600 rpm). Mixing time should be continued for 3 minutes until a uniform consistency is obtained.

PLACING AND FINISHING

KingRep 100LS can be applied by trowel or hand. The mixed mortar should be applied using firm pressure to fully compact the mortar and ensure good adhesion with the steel reinforcement and substrate.

Finishing and leveling should be carried out initially by wooden or plastic float. Final finishing should be carried out using steel float.

CURING

As KingRep 100LS is a cementitious based material, it should be cured in a similar method to concrete. Curing can be conducted by using KingKure 100A or wet hessian sheets covered with polyethylene sheets.

CLEANING

All tools shall be cleaned immediately after application using fresh water. Hardened materials must be

KingRep ® 100LS

cleaned mechanically.

PACKAGING

KingRep 100LS is available in 25 kg bags.

THICKNESSES AND SIZE LIMITATIONS

KingRep 100LS can be applied in a single application for sections up to 20 mm thick in overhead applications and 50 mm thick in vertical applications. Thickness should not be less than 10 mm deep in all applications.

KingRep 100LS repair area should not exceed 2.5 m^2 in one single application. Thickness more than 20 mm overhead or more than 50 mm vertical can be built up in layers.

YIELD

Approximately 16 - 17 litre per 25 kg bag. (60 bags/m^3).

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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