KingRep® SA200

One component spray applied high build cementitious repair mortar.

DESCRIPTION

KingRep SA200 is a one component polymer modified and fibre reinforced repair mortar. KingRep SA200 is a blend of dry powders, selected aggregates and fibres which when mixed with water produces a high build thixotropic mortar suitable for wet or dry spraying on vertical and overhead application.

APPLICATIONS

- Repair of all types of structural concrete where high strength and extremely low shrinkage properties are required.
- For the repair of vertical and overhead elements.
- Large areas repair mortar for all structural elements in buildings, water retaining structures, industrial plants, bridges, etc.

ADVANTAGES

- Shrinkage controlled polymer modified cementitious repair mortar. Reduces the risk of cracking due to shrinkage and ensures full contact with host concrete and load transfer in structural repair situations.
- Easy to apply, single component, requires only addition of water.
- Extremely low permeability to water, providing excellent protection to steel reinforcements and host concrete.
- Thixotropic properties allowing extra high build for vertical and overhead applications.
- Suitable for internal and external application.
- Water vapour permeable.
- Cost effective, spray applied no formwork is required.
- Can be spray applied allowing for rapid application of large areas with minimal rebound.

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.

TECHNICAL PROPERTIES

Colour:	Grey
Compressive strength: ASTM C109/109M-02	> 50 MPa @ 7 day > 60 MPa @ 28 days
Length change: ASTM C157	up to 0.04% @ 56 days
Tensile strength: ASTM C190	> 5 MPa @ 28 days
Mixing ratio:	4.5 litre of water for 25 kg bag of KingRep SA200
Minimum application temperature:	5°C
Mixed density:	2.1 ± 0.1 g/cm³

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. Areas to be repaired with KingRep SA200 should be soaked with clean water before applying the repair mortar. All excess water should be removed prior to applying KingRep SA200.

MIXING

To ensure proper mixing, a mechanically powered mixer should be used. 4.5 litre of clean water should be added to clean mixing hopper. The powder is then added slowly to the water continuously. Mixing time should be continued for 3 minutes until uniform consistency is obtained.

PLACING AND FINISHING

KingRep SA200 should be applied by special spraying machine (Contact KINGKRETE Technical Department). Finishing and leveling should be carried out initially by wooden or plastic float.
Final finishing should be carried out using steel float.

CURING

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As KingRep SA200 is a cementitious based material, it should be cured in a similar method to concrete. Curing can be conducted by using KingKure 100A or by wet hessian sheets covered with polyethylene sheets.

HIGH AND LOW TEMPERATURE APPLICATION

- KingRep SA200 can be applied at a temperature range of 5ºC to 35ºC.
- At high ambient temperatures (above 35ºC), make sure that the product is stored in shaded areas prior to use, and cold water used for mixing of product.
- If air temperature drops to 5ºC, warm mixing water should be used to accelerate strength development.
- Accelerated heating methods are not to be used under any circumstances.
- Material should not be used at temperatures below 5ºC.

LIMITATIONS

- Mixing instructions should be strictly followed in order to obtain the required strength and performance.
- Always mix full bag content. Avoid part bag mixing.
- Do not use product if ambient temperature or substrate is below 5ºC.
- Never add water or fresh mortar to a mortar mix which has already begun to set.
- Do not add cement, sand or other substances that could affect the properties of KingRep SA200.
- Do not expose freshly repaired surfaces to heavy loads for the first 24 hours.

CLEANING

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

PACKAGING

KingRep SA200 is available in 25 kg bags.

KingRep SA200 can be applied in a single application for sections up to 150 mm thick in overhead applications and 200 mm thick in vertical applications. Thickness should not be less than 10 mm deep in all applications.

YIELD

Approximately 13.50 litre per 25 kg bag. (74 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.

THICKNESSES AND SIZE LIMITATIONS

QUALITY AND CARE

All products originating from KingKrete’s manufacturing

KingRep® SA200

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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KingKrete Middle East
www.kingkrete.com

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KingRep® SA200