KingRep ® 60T

One component high build high strength cementitious repair mortar.

DESCRIPTION

KingRep 60T is a one component polymer modified and fibre reinforced repair mortar. KingRep 60T is a blend of dry powders, selected aggregates and fibres which when mixed with water produces a thixotropic mortar suitable for 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.
- As a repair mortar for all structural elements in buildings, water retaining structures, industrial plants, bridges, etc.

ADVANTAGES

- Shrinkage controlled polymer modified cementitious repair mortar.
- 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.
- Suitable for use in contact with potable water.
- Cost effective, hand applied no formwork is required.

STANDARDS

- KingRep 60T complies with the requirement of EN 1504-3 as structural repair mortar of Class R4.
- KingRep 60T complies with the requirements of BS 6920 for the suitability of the product for use in contact with water intended for human consumption.

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.

TECHNICAL PROPERTIES

Colour:	Grey & white
Fresh wet density:	2.1 ± 0.1 g/cm³
Minimum application temperature:	5°C
Compressive strength: ASTM C109/109M	≥ 60 MPa @ 28 days
Flexural strength: ASTM C348	≥ 10 MPa @ 28 days
Tensile strength: ASTM C307	≥ 3 MPa @ 28 days
Change in length: ASTM C157	Up to 0.1% @ 56 days
VOC: ASTM D2369	≤ 5 g/ltr

Performance characteristics :	EN 1504-3 Requirement for Class R4	Measured Value
Compressive strength: EN 12190	≥ 45 MPa	≥ 55 MPa
Chloride content: EN 1015-17	≤ 0.05%	0.01%
Adhesive bond: EN 1542	≥ 2 MPa	≥ 2.25 MPa
Carbonation resistance: EN 13295	≤ control concrete MC (0,45)	Passes
Thermal compatibility freeze-thaw: EN 13687-1	≥ 2 MPa	≥ 2 MPa
Dangerous substance:	Complies with 5.4	

Note: Declared results above are for the grey colour.

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

PRIMING

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All grit blasted steel reinforcements should be primed within 2 - 4 hours with one or two coats of zinc rich epoxy coating Repcoat ZR. Areas to be repaired with KingRep 60T should be soaked with clean water before applying the repair mortar. All excess water should be removed prior to applying KingRep 60T.

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 uniform consistency is obtained.

PLACING AND FINISHING

KingRep 60T can be applied by trowel or hand. The mixed mortar should be applied using firm pressure to fully compact the mortar to ensure good adhesion with the steel reinforcements and the 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 60T 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.

CLEANING

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

PACKAGING

KingRep 60T is available in 25 kg bags.

THICKNESSES AND SIZE LIMITATIONS

KingRep 60T can be applied in a single application for sections up to 50 mm thick in overhead applications and 75 mm thick in vertical applications. Thickness should not be less than 10 mm deep in all applications. KingRep 60T repair area should not exceed 2.5 m² in single application.

YIELD

Approximately 13.5 - 14 litre per 25 kg bag. (76 bags/m³).

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.

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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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