

Shrinkage controlled, polymer modified, vertical and overhead cementitious repair mortar system

Uses

Renderoc TGXtra is suitable for hand application to repairs where light to medium load bearing is required. Typical applications would include, but not be limited to, the following:

- Vertical and overhead repairs to restore 'covercrete'
- General concrete and masonry repairs
- Voids greater than 10 mm deep
- Repairs to honeycombing
- Larger scale repairs where formwork cannot be erected

Advantages

Renderoc TGXtra features **Dimensional Stability Technology** - a new materials technology which controls the rate of drying shrinkage such that, when used correctly :

- i. the dimensions of the repair remain stable; and thus
- ii. eliminating failure, due to shrinkage cracking.

This in turn leads to a series of associated benefits :

- **Cost effective** - shrinkage control enables repairs to be completed 'right first time'
- **Enhanced durability** - works in tandem with extremely low permeability to prolong effective working life
- **Compatibility** - aligns performance closer than ever before, to that of host concrete
- **User friendly** - specifically developed to provide an easy-to-apply product, suitable for local conditions
- **Definable performance** - positive benefits are easily demonstrated via a single, simple measurement

Description

Renderoc TGXtra is supplied as a ready to use blend of dry powders, which requires only the addition of clean water to produce a highly consistent, lightweight repair mortar suitable for general purpose concrete and masonry repairs.

Properties

The following typical results were obtained at a water to powder ratio of 0.18.

Test method	Typical result
Drying shrinkage to ASTM C 157-93	
7 days	: < 300 microstrain
28 days	: < 500 microstrain
Permeability (DIN 1048 Part 5)	: < 10 mm
Flexural strength (BS 6319 Pt. 3)	: > 6.5 N/mm ² at 28 days
Compressive strength (BS 1881 Pt.116¹)	: 35 N/mm ² at 7 days 40 N/mm ² at 28 days
Water absorption (BS 1881 Pt. 122)	: < 2%

Design criteria

Dimensional Stability Technology is a major step forward in the general compatibility of repair mortar systems with the host concrete, and the control of shrinkage in particular.

Attention to the basic design criteria given below should ensure that the full benefits of this technology are gained in use :

- (i) Recommended limits for a single application are:

Minimum applied thickness	: 10 mm
Overhead sections	: up to 50 mm thick
Vertical sections	: up to 50 mm thick
Small pockets or horizontal	: up to 100 mm thick
Maximum length	: up to 3 m

NOTE: If the repair area exceeds 2.5 m², consideration should be given to the use of mass fill by means of either Renderoc SPXtra* spray applied mortar or Renderoc LAXtra* microconcrete.

- (ii) In situations where a substrate/repair barrier is required, or enhanced bond strength/working time is required, or where the substrate is likely to be permanently wet or damp (e.g. seawalls, quays etc.), Nitobond EP epoxy bonding agent should be used.

- (iii) Water addition = 4.5 ltrs / 25kg bag Under no circumstances should part bags be used or additional water be employed. Either of these two actions will adversely affect material performance, automatically invalidating Fosroc's standard product guarantee.

Fosroc Renderoc TGXtra

Galvanic Protection of repairs

It is likely that, steel reinforcement in the area around a patch repair, particularly in a chloride contaminated environment, will typically corrode after the repairs are carried out, referred to as the incipient anode or Halo effect.

Galvashield XP*† (eXtra Protection) anodes can be incorporated into patch repairs to galvanically protect steel reinforcement against corrosion in the adjacent concrete and may also be used in new construction to provide Cathodic Prevention. Galvashield XP are zinc based anodes encased in a highly alkaline mortar which maintains the surface of the zinc in an active state. Galvanic systems are self regulating and demand based and will start working only when corrosion of steel begins. Refer to product datasheet for further details.

Instructions for use

Renderoc TGXtra should be mixed and applied in strict accordance with the Product Method Statement, a copy of which may be obtained from your nearest Fosroc office.

Estimating

Supply

Renderoc TGXtra	:	25kg bags
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Yield

Renderoc TGXtra	:	15.8 litres per 25kg bag
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Limitations

- Renderoc TGXtra should not be used when the ambient temperature is below 5°C and falling.
- Renderoc TGXtra should not be part mixed, nor part bags used.
- Renderoc TGXtra should not be exposed to running water either during application or prior to final set.
- Water ponding is not recommended for curing.

Storage

Shelf life

Renderoc TGXtra has a shelf life of 12 months; if kept in a dry environment, in its original, unopened packing. If stored in conditions of high humidity and/or temperature, the shelf life may be reduced to as little as 4 months.

Standards compliance

Renderoc TGXtra repair mortar system complies with the following international standards :

ASTM C157-93	:	Test for drying shrinkage
DIN 1048 Pt. 5	:	Test for permeability
BS 1881 Pt. 122	:	Test for water absorption

Precautions

Health and safety

Renderoc TGXtra contains cement powders which, when mixed with water or upon becoming damp, release alkalis which can be harmful to the skin.

During use, avoid inhalation of the dust and contact with the skin or eyes. Wear suitable protective clothing - eye protection, gloves and respiratory equipment (particularly in confined spaces).

The use of barrier creams to provide additional skin protection is also advised. In case of contact with the skin, rinse with plenty of clean water, then cleanse thoroughly with soap and water.

In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed seek medical attention immediately - do **not** induce vomiting.

Fire

Renderoc TGXtra, is non-flammable and thus presents no fire hazard.

For further information, please refer to the Product Material Safety Data Sheet for Renderoc TGXtra.

* Denotes the trademark of Fosroc International Limited

† See separate data sheet



Important note

Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard Conditions for the Supply of Goods and Service. **All Fosroc datasheets are updated on a regular basis. It is the user's responsibility to obtain the latest version.**

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