



constructive solutions

Renderoc LAXtra*

Shrinkage controlled, fluid microconcrete for structural repairs of all types

Uses

Renderoc LAXtra is suitable for mass infill to structural repairs in all types of loadbearing situation. Typical applications would include, but not be limited to, the following:

- Repairs to columns suffering from major loss of section
- Soffit repairs where heavy loadbearing is required
- Repairs to restricted access areas, where use of hand applied mortars would prove impractical
- Repairs requiring high fluidity e.g. heavily congested steel or repairs into re-entrant angles/concealed voids
- Any repairs requiring significant levels of loadbearing

Advantages

Renderoc LAXtra 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.

Standards compliance

Renderoc LAXtra repair microstrain system complies with the following international standards:

ASTM C157-93: Test for drying shrinkage

DIN 1048 Pt. 5: Test for permeability

BS 1881 Pt. 121: Test for water absorption

Description

Renderoc LAXtra is supplied as a ready to use blend of dry powders and selected aggregates, which requires only the addition of clean water to produce a highly consistent, fluid microconcrete suitable for all load-bearing situations.

Properties

The following typical results were obtained at water to powder ratio of 0.135.

Drying shrinkage to ASTM C157-93	
7 days	: < 300 microstrain
28 days	: < 500 microstrain
Permeability (DIN 1048, Part 5)	
	: < 10 mm
Flexural strength (BS 6319, Part 3)	
	: > 9 N/mm ² @ 28 days
Tensile strength (BS 6319, Part 7)	
	: > 5 N/mm ² @ 28 days
Compressive strength (BS 1881, Part 116¹)	
	: 39 N/mm ² @ 3 days
	: 45 N/mm ² @ 7 days
	: 60 N/mm ² @ 28 days
Water absorption (BS 1881, Part 121)	
	: < 2%

Note 1: 100 mm cubes, air cured @ 25°C

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. Renderoc LAXtra is designed for large volume repairs, typically in excess of 50 mm deep. The product can be applied in sections generally between 50 and 200 mm thick, greater thicknesses may be achievable, depending upon repair configuration and location together with the volume of reinforcing steel. Consult the local Fosroc office for more information.

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 damp (e.g. seawalls, quays etc.), Nitobond EP epoxy bonding agent should be used.

III. Water addition = 2.7 litres per 20 kg 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.

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Limitations

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

Estimating

Supply

Renderoc LAXtra : 20 kg bags

Coverage

Actual coverage rate is approximate, and will be wholly dependent upon the general substrate condition. It is recommended, therefore, that site trials over a typical area are conducted to determine the likely usage/coverage rates for a particular substrate.

Renderoc LAXtra : 0.9 m² @ 10 mm thickness
(Approximately 9.6 litres per 20 kg bag)

Storage

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

Precautions

Health and safety

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

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

* Denotes the trademark of Fosroc International Ltd.



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.

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