

Shrinkage controlled, polymer modified, fluid microconcrete for structural repairs of all types

Uses

Renderoc LAXtra is suitable for mass infill to structural repairs in all types of load bearing 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 load bearing 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 material 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 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 a water:powder ratio of 0.14

Test method	Typical result
Drying shrinkage to ASTM C157-93	
7 days	:< 300 microstrain
28 days	:< 500 microstrain

Permeability (DIN 1048 Part 5)	:< 10mm
Flexural strength (BS 6319 Pt.3)	:> 9 N/mm ² at 28 days
Tensile Strength (BS 6319 Pt.7)	:> 3.5 N/mm ² at 28 days
Compressive strength (BS 1881 Pt.116 ¹)	:> 35 N/mm ² at 3 days > 45 N/mm ² at 7 days > 55 N/mm ² at 28 days
Water absorption (BS 1881 Pt. 122)	:< 2%

Note1: 100mm cubes, air cured @ 20°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 = 3.5ltrs / 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.

Anti-corrosion protection to reinforcement

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.

Fosroc Nitozinc Primer, two component, zinc rich epoxy based anti-corrosion protective coating shall be brush applied over the prepared & dry surface of the exposed rebars and allowed to completely dry prior to application of Renderoc LAXtra repair mortar.

Fosroc Renderoc LAXtra

Instructions for use

Renderoc LAXtra 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 LAXtra : 25kg bags

Yield

Renderoc LAXtra : 12.25 ltrs per 25kg bag

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.

Storage

Shelf life

Renderoc LAXtra has a shelf life of 6 months if kept in a dry environment, in its original packing. If stored in conditions of high temperature and/or humidity, the shelf life may be reduced to as little as 4 months.

Standards compliance

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

ASTM C157-93 : Test for drying shrinkage

BS 1881 Pt. 122 : Water absorption

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.

Important note :

Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale, copies of which may be obtained on request. Whilst Fosroc endeavours to ensure that any advice, recommendation specification or information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products whether or not in accordance with any advice, specification, recommendation or information given by it.



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