

Ronafix for Concrete Repairs

Polymer admixture for use with concrete repair mortars



FEATURES

- thin section application
- waterproof
- frostproof
- high compressive strength
- high flexural strength
- high tensile strength
- excellent adhesion
- provides protection to steel reinforcement

Description

Ronafix is a single part modified styrene butadiene liquid additive for cement mortars which enhances physical and chemical properties, allows mortars to be placed in thin section, provides waterproofing and resistance to frost and promotes adhesion to building surfaces.

Mortars containing Ronafix are used for a wide range of applications where thin high strength high performance mortars are required. Typical minimum application depth is 6mm.

There are 2 mix designs when using Ronafix as a concrete repair mortar. Ronafix Mix Design A is used for concrete repairs where there is no exposed steel reinforcement and Ronafix Mix Design D is used where any reinforcement is exposed.

Test Data (Ronafix Mix A)

Compressive Strength

1 day	38N/mm ²
3 days	45N/mm ²
7 days	56N/mm ²
28 days	70N/mm ²

Tensile Strength

7 days	5.0N/mm ²
28 days	7.1N/mm ²

Flexural Strength

7 days	12.9N/mm ²
28 days	16.2N/mm ²

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Test Data (Ronafix Mix D)

Compressive Strength

1 day	22N/mm ²
3 days	34N/mm ²
7 days	42N/mm ²
28 days	53N/mm ²

Tensile Strength

7 days	5.7N/mm ²
28 days	8.4N/mm ²

Flexural Strength

7 days	15.8N/mm ²
28 days	19.1N/mm ²

Compression tests:

Flexural tests:

Tensile tests:

100mm cubes

100 x 25mm x 25mm prisms

dumbell specimens

Test Authority:

British Precast Concrete Federation

CMC Laboratories

W & C French Ltd

Ronacrete Laboratories

Laboratory Results: Results shown are in N/mm². Maximum laboratory strengths are achieved by casting and curing cubes in ideal working conditions; site strengths will be lower.

Mix Design (Ronafix Mix A)

By weight

Cement	50kg
Medium sharp sand	125kg
Ronafix	9 litres
Water	9 litres (approximately)

Mix Design (Ronafix Mix D) (use where steel reinforcement is exposed)

By weight

Cement	50kg
Medium sharp sand	125kg
Ronafix	14 litres
Water	4 litres (approximately)

Instructions for Use

Preparation

All concrete and defective material identified for removal must be removed back to a suitable substrate which is sound and stable and which will accept the repair mortar.

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Instructions for Use (continued)

Reinforcing steel in the repair area must be exposed, and concrete cut back along the length of the steel to expose not less than 25mm of clean uncorroded steel. Loose rust and scale must be removed (eg. by the use of wire brushing and/or emery cloth or sand paper). Cut around the periphery of spalled areas to a minimum depth of 6mm at 90° to avoid dished edges and feather edged repairs.

The concrete must be removed around the steel to allow not less than 15mm of repair mortar to be placed around the steel. Corroded steel must be replaced where considered necessary by the engineer.

All removal of concrete and steel must be carried out in accordance with the specifiers recommendations.

All surfaces must be cleaned to remove loose dust, debris and surface contamination which may prevent adhesion of repair mortar to concrete and steel.

When repairing chloride contaminated concrete steel must be grit blasted back to bright steel; the method used to prepare concrete surfaces may differ and the Ronacrete Technical Department should be consulted.

Damping

Following preparation of concrete and steel, thoroughly damp all concrete surfaces to be repaired. Remove any standing water. Water used must be clean and of potable quality.

Priming

Brush apply a 1:1 Ronafix:cement primer coat to the steel and allow to become tacky, not dry. If the primer dries it must be thoroughly scarified and reapplied.

When priming coat on steel is tacky, brush a single coat of primer on to the damp concrete or substrate and apply a second coat on to the steel. Ensure that the first priming coat applied to the steel is not removed during the application of the second coat.

The Ronafix repair mortar must be applied on to the wet or tacky primer before the primer dries. If the primer dries it must be thoroughly scarified and reapplied.

Mixing

Mix the Ronafix modified mortar and apply in layers to achieve the required thickness, reform the original profile of the concrete and cover reinforcing steel. Layer thickness will vary according to the nature of the substrate, the shape and size of area being repaired and mixing and application technique.

Ronafix modified mortars can be mixed by hand or machine. Machine mixing will more easily provide a mortar with even dispersion of mix components and a lower water/cement ratio. The use of a forced action mixer (eg. Creteangle or drill and paddle) will provide optimum performance; free fall mixers cause the mortar to ball up with a resultant reduction in performance and must not be used.

Ronafix for Concrete Repairs

Polymer admixture for use with concrete repair mortars

Instructions for Use

Placing

Apply the mortar in layers to achieve the required thickness, reform the original profile of the concrete and cover reinforcing steel. Layer thickness will vary according to the nature of the substrate, the shape and size of area being repaired and mixing and application technique.

Materials may be applied using a combination of hand packing or traditional tools. The concrete repair mortar must be well compacted to prevent honeycombing and voids.

Apply the concrete repair mortar in successive layers to achieve the required thickness. Scratch the face of intermediate layers and apply a coat of Ronafix:cement primer immediately prior to applying the next layer.

If applying a protective or decorative coating such as RonaBond Crack Bridging Anti-Carbonation Coating and RonaBond Anti-Carbonation Coating WB leave the final layer with a sponged or wood float finish to aid adhesion.

Cure the finished repair with Ronacrete Curing Membrane or tight fitting polythene.

Packaging

Ronafix is supplied in 5 litre, 25 litre, 210 litre and 1000 litre containers.

Shelf Life and Storage

Ronafix should be stored unopened between 5°C and 25°C in dry warehouse conditions away from direct heat and sunlight. Shelf life is approximately 9 months in unopened containers.

Health and Safety

Ronafix is non-hazardous although protective clothing such as goggles, overalls and gloves are recommended to prevent any effect from prolonged skin contact, inhalation or ingestion.

In the event of skin contact, wash with soap and water. Seek medical advice if irritation or pain occurs. In the event of eye contact, irrigate with plenty of clean water and seek immediate medical advice. In the event of ingestion, do not induce vomiting. Seek immediate medical advice.

Site attendance

When on site Ronacrete representatives are able, if asked, to give a general indication of the correct method of installing a Ronacrete product. It is important to bear in mind that Ronacrete Ltd is a manufacturer and not an application contractor and it is therefore the responsibility of the contractor and his employer to ensure he is aware of and implements the correct practices and procedures to ensure the correct installation of the product and that liability for its correct installation lies with the contractor and not with Ronacrete Ltd.

The information detailed in this leaflet is liable to modification from time to time in the light of experience and of normal product application, and before using, customers are advised to check with Ronacrete Ltd, quoting the reference number, that they possess the latest issue. Any person or company using the product without first making further enquiries as to the suitability of the product for the intended use does so at his own risk, and Ronacrete Ltd can accept no responsibility for the performance of the product, or for any loss or damage arising out of such use.