

RonaBond HB40 Ultra Rapid

Rapid setting mortar for high build concrete repair on vertical and overhead surfaces



FEATURES

- rapid set and strength gain
- multiple layer application in 1 day depending on temperature
- low temperature use
- high build repairs to 75mm
- ease of application
- prepacked for control and convenience
- waterproof
- frost proof
- smooth surface finish prior to application of protective/decorative coating
- high strength, monolithically bonded mortar
- use for structural concrete repair, dubbing out
- excellent for thick section soffit work

Description

RonaBond HB40 Ultra Rapid mortar is used for repairing concrete on vertical and overhead surfaces where ease of application is as important as strength. RonaBond HB40 Ultra Rapid can be applied in relatively thick section to walls and soffits and, depending on the nature of the repair, in layers up to 75mm depending on size and orientation. RonaBond HB40 Ultra Rapid is suitable for use at lower temperatures, minimum 2°C. Multiple layers may be applied in a single day depending on temperature.

Test Data

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| Compressive strength (N/mm²) | |
| 1 hour | 6N/mm ² |
| 24 hours | 30N/mm ² |
| 7 days | N/A |
| 28 days | 37N/mm ² |
| Tensile strength @ 28 days | 2.7 N/mm ² |
| Flexural strength @ 28 days | 7.1 N/mm ² |
| ISAT (ml/m ² /sec) | 0.0 |

Physical Properties

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| Min / max build per layer (mm) | 6 / 75 |
| Density (kg/m ³) | 1550 |
| Min / max application temperature (°C) | 2 / 25 |
| Packaging | 18kg |
| Water addition per pack (litres) | 3 - 3.2 |
| Yield (litres) | 13 |
| Packs required per m ³ | 77 |
| Coverage per pack | 1m ² at 13mm |

Supply

RonaBond HB40 Ultra Rapid is supplied prepacked requiring only the addition of water.

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Working Temperatures

RonaBond HB40 Ultra Rapid can be used in most weather conditions and in a wide temperature range, from +2°C to 25°C and above. At high ambient and material temperature the working time of the mix will be reduced; it will be increased at lower temperatures.

Instructions for Use

Preparation of concrete and steel

All concrete identified for removal must be broken out to ensure that repair materials are applied to a sound and stable substrate and that the minimum mortar thickness can be applied throughout. Repair edges must be saw cut at an angle of 90 degrees to the plane of the concrete, to avoid feather edging.

Reinforcing steel in the repair area must be exposed to its full circumference, until uncorroded steel is visible, to a sufficient depth for adequate cleaning of the bar, Loose rust and scale must be removed.

Cover to reinforcement must be $\geq 15\text{mm}$ to ensure adequate protection of steel and prevent reflective cracking.

Corroded steel must be replaced where necessary.

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

When repairing chloride contaminated concrete the method used to prepare and prime surfaces may differ and the Ronacrete Technical Department should be consulted.

All surfaces must be cleaned to remove loose dust, debris and surface contamination which may prevent adhesion of the repair mortar to concrete and steel. Concrete must be clean and prepared with a scabbler or needle gun.

Wetting and priming

Following preparation of concrete and steel, thoroughly wet all concrete surfaces to be repaired with clean water to satisfy concrete porosity. Remove free water immediately before priming.

Brush apply Ronacrete Rapid Primer to the steel and allow to become tacky, not dry.

When the priming coat on steel is tacky, brush a single coat of the same primer on to the damp concrete and 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, or scatter kiln-dried sand into the wet first coat and apply the second coat to the dry and keyed first coat.

Mixing

RonaBond HB40 Ultra Rapid must be mixed mechanically in a forced action mixer (e.g. Creteangle pan mixer) or using a high power slow speed drill (typically 500 rpm) with a paddle attachment, MR 4 or similar (do not use a free fall mixer).

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Instructions for Use (continued)

Pour the dry powder into a mixing vessel containing ≥ 3 litres (but not more than 3.2 litres) of clean water. Mix for approximately 3 minutes to produce an even consistency. Note that the mix will stiffen during transit to the repair position.

Use complete packs to ensure consistency, uniform dispersion of pack contents and accuracy of powder:water ratio. To avoid a false set in warm working conditions store materials in the shade and use cool water.

Application

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

Apply the mortar to reform the original profile of the concrete and cover reinforcing steel. Ensure that the mortar is fully compacted, paying particular attention to avoidance of voids around reinforcement. Layer thickness will vary according to the shape and size of the repair, the texture of the substrate and application technique. Application techniques include hand packing the mortar on to the surface.

When multiple layer application is required, each intermediate layer must be combed and allowed to harden before application of Ronacrete Rapid Primer and a further layer of mortar. The repair must be finished with a steel or wood float, and may be dry sponge finished if required. If applying a protective or decorative coating such as RonaBond Crack Bridging Anti Carbonation Coating WB, RonaBond Anti-Carbonation Coating WB or RonaBond Masonry Paint WB, leaving the final layer with a sponge finish will aid adhesion.

Curing

Cure with Ronacrete Curing Membrane or tight fitting polythene as soon as possible and as quickly as is practical to prevent rapid early moisture loss from the mortar surface and minimise the risk of resultant plastic cracking. Curing is more important when working in direct sunlight and/ or in a drying breeze or wind.

Note that maximum application depth per layer is reduced and typical maximum layer thickness in larger repairs is 50mm vertically and 30mm overhead.

Shelf Life and Storage

RonaBond HB40 Ultra Rapid should be stored unopened between 10°C and 25°C in dry warehouse conditions and out of direct sunlight. In these conditions shelf life is approximately 9 months.

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.




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Health and Safety

RonaBond HB40 Ultra Rapid products contain cement; protective clothing such as goggles, overalls and gloves is 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. In the event of eye contact, irrigate with plenty of clean water and seek medical advice. In the event of ingestion do not induce vomiting. Seek immediate medical advice.

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| Ronacrete Ltd, Flex Meadow, Harlow Essex, CM19 5TD, UK 13 0836-CPR-13/F046 |
| BS EN 1504-3 Concrete Repair |
| Product: RonaBond HB40 Ultra Rapid Compressive Strength: ≥ 25 MPa Chloride ion Content: $\leq 0.05\%$ Bond Strength Test: ≥ 1.5 MPa Rest. Shrinkage/Expansion: ≥ 1.5 MPa Carbonation Resistance: $dk \leq$ control concrete (MC (0.45)) Reaction to Fire: A2-s1,d0 Dangerous Substances: Refer to Safety Data Sheet |

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.