



SRO1273 Concrete Repair and Façade Restoration ARDEX BR 340 and ARDEX BR 345 Non Structural - Hand Pack

Scope

[ARDEX BR 340](#) and [ARDEX BR 345](#) are fibre-reinforced, polymer-modified concrete patching and repair mortars. Both are high-build patching mortars capable of being applied from a minimum thickness of 10mm up to a thickness of 80mm on vertical, horizontal and overhead surfaces. They are designed to be applied by 'hand packing' and are used in conjunction with an appropriate ARDEX bonding bridge or primer.

[ARDEX BR 345](#) - Generally recommended for 'non-structural' repairs.

[ARDEX BR 340](#)- May be used for 'non-structural' repairs, but is mainly used in 'structural' repair where cathodic prevention (anode installation) is required.

Applications

These repair mortars are designed for reinstating concrete surfaces damaged through concrete spalling and other chemical or mechanical causes.

Substrates

Suitable substrates for repair mortars include:

- Firm compacted and properly cured concrete
- Steel reinforcement that has been prepared with [ARDEX BR 10 ZP](#) Zinc Primer

Substrate Preparation

The substrate must be clean, sound and free from all grease, oil, dust and other surface contaminants such as curing compounds. Damaged or contaminated concrete must be removed to obtain a good bond to the substrate. The edges of the repair should be cut vertically to a minimum depth of 10mm. All surface laitance must be removed.

Exposed reinforcing steel should be cleaned to remove all residual rust and concrete residue. Concrete should be removed from around and behind all corroding steel reinforcement to avoid future contamination of the repaired area.

Priming - Concrete

The prepared substrate should be pre-soaked for 24 hours but at least 2 hours before applying [ARDEX BR 345](#) / [ARDEX BR 340](#). The surface should be damp but without standing water. The substrate should then be primed by employing one of the following methods:

- (1) Concrete (Option A) - [ARDEX WR Prime](#) should be applied and worked into the substrate. Once the [ARDEX WR Prime](#) has dried (approximately 3 hours at 23C and 50% RH), [ARDEX BR 345](#) / [ARDEX BR 340](#) can be applied.



- (2) Concrete (Option B) - A slurry bond coat of [ARDEX WR Prime](#) and [ARDEX BR 345 / ARDEX BR 340](#) should be made to a stiff, brushable consistency and applied to the dampened surface.
- (3) Steel Reinforcement - Use [ARDEX BR 10 ZP](#) Zinc-rich Primer as primer for steel reinforcement in concrete. Apply [ARDEX BR 10 ZP](#) in a continuous film; apply a second coat if needed. [ARDEX BR 10 ZP](#) should be cured prior to applying the repair mortar.

[ARDEX BRP 30 EP](#) can be used in situations where the substrate is likely to remain damp or wet. It is generally used as a bonding coat for the concrete repair mortars for repairs on bridges, roads, wharfs, loading docks, warehouses and factories.

Note: It is recommended that the Safety Data Sheets for both Part A and Part B of this epoxy primer be read and understood before commencement.

Mixing

Note: Safety precautions must be taken. i.e., eye protection, chemically resistant gloves and a dust mask must be worn.

Use approximately 3.2 – 3.5L water per 20kg bag of [ARDEX BR 345 / ARDEX BR 340](#). Measure the water into a clean suitably sized pail (20 Litre) and then add approximately half to two-thirds of the powder to the water. This should be done while mixing with a heavy duty electric drill and spiral mixing paddle on slow-medium speed (approx. 400-600 rpm).

Mix to fully wet-out the initial powder addition. The remaining one third of the powder can then be mixed to fully disperse. Continue mixing for approximately 2 to 3 minutes to fully homogenise. Let the mixed mortar sit for 1 – 2 minutes, then briefly mix the mortar again (20 seconds) prior to placement.

Application

Note: Safety precautions must be taken. i.e., chemically resistant gloves must be worn.

[ARDEX BR 345 / ARDEX BR 340](#) should be applied onto the prepared primed substrate. This will be while the slurry coat priming layer is still wet (wet-on-wet) or when the WR Prime is dry to touch.

Apply using a trowel or by hand (**wearing chemically resistant gloves**). Make sure that the material is sufficiently forced and compacted into cracks and holes to ensure that all voids are filled.

Note: Minimum application thickness is 10mm. If the repair mortar slumps, it must all be removed then re-applied (at a reduced thickness) after re-priming the substrate.

Finishing

Once the mortar has set, and the surface is hard enough, work can begin on the surface finish. The surface finish can be made dense and smooth by using a wooden or plastic float, or coarse and sandy by using a sponge to give the required effect.

Curing



The ARDEX curing compound [ARDEX BA 70 CC](#) should be used immediately after the surface of the mortar has been 'finished'. It should be sprayed onto the surface of the finished repair mortar in one coat at an even coverage rate of 5 m²/litre.

Note: If over-coating is required there are two options regarding curing of the mortars. They are:

- The curing compound (applied as above) must be removed from the surface of the repair by mechanical means. E.g., grinding.
- The use of a curing compound could be negated by covering the repaired areas with plastic for a period of seven days before either applying a fairing coat, render or a façade membrane with [ARDEX BR 120 FC](#).

Over-coating

If a fine finish is required, the Repair Mortars can be over-coated with [ARDEX BR 120 FC](#) as a Fairing Coat.

The repaired patch may also be rendered over with a suitable **ARDEX** render or **ARDEX** coating. Refer to relevant Technical Datasheets for application of overcoats.

Note: The repaired area must be protected by a render or a coating. It is not meant to be left exposed.

Disclaimer:

The recommendation selected is based upon questions answered on the ARDEX Australia website. This recommendation is designed as a general application for your described situation and should not be considered site specific documentation for general distribution. Always consult the latest relevant ARDEX Technical Bulletins and information on the product packaging and/or product data sheets (available on the ARDEX Website). Australian and other relevant standards should be followed during installation. If you have any further questions or would like further clarification please contact the ARDEX Technical Services Hotline on 1800 224 070 (9am to 5pm Monday to Friday).