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| **From** | ARDEX Australia (AAu-NSW) |
| **Issue date** | Monday, 24th July 2017 |
| **Subject** | ARDEX BR 345 - MICROTEC® Fibre-Reinforced, High Resistivity, Polymer-Modified, Structural Concrete patching and Repair Mortar. |

**SCOPE**

The [ARDEX BR 345](http://ardexaustralia.com/products/repair-mortars/ardex-br-345) - MICROTEC® Fibre-Reinforced, High Resistivity, Polymer-Modified, Structural Concrete patching and Repair Mortar is designed for reinstating concrete surfaces damaged through concrete spalling and other chemical or mechanical causes.

**SUBSTRATES**

Concrete

**PREPARATION**

The substrate must be clean, sound and free from all grease, oil, dust and other surface contaminants such as curing membranes. Damaged or contaminated concrete must be removed to obtain a good bond to the substrate. Cut the edges of the repair 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. Exposed reinforcing must be cleaned and protected with [ARDEX BR 10 ZP](http://ardexaustralia.com/products/repair-mortars/ardex-br-10-zp) Zinc-rich Primer in a continuous film.

**PRIMING**

The prepared substrate should be pre-soaked for 24 hours, but at least 2 hours before applying ARDEX BR 345. The surface should be mat damp but without standing water. ARDEX BR 345 does not require priming on a properly prepared substrate. If priming is required, the substrate should be primed by employing one of the following methods:

1. A slurry bond coat of ARDEX BR 345 should be made to a stiff, brushable consistency and applied to the dampened surface.
2. ARDEX WR Prime should be applied and worked into the substrate. Once the ARDEX WR Prime has reached initial cure, ARDEX BR 345 can be applied.

If a bonding bridge is used, apply the ARDEX BR 345 as soon as the bridge is tacky enough to hold the weight of the mortar. ARDEX BR 345 should be applied wet-on-wet. Do not let the bonding layer dry out completely. If the surface is too wet or too dry, application of ARDEX BR 345 may be difficult.

**PRIMING FOR REINFORCED STEEL**

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.

**APPLICATION**

ARDEX BR 345 is to be applied onto the prepared primed substrate. Make sure that the patching mortar is applied whilst the priming layer is still wet (wet-on-wet). 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.

If repair mortar slumps, remove all ARDEX BR 345 and re-apply after re-priming the substrate, then apply the repair mortar at a reduced thickness.

**FINISHING**

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

**CURING**

An approved ARDEX curing compound such as [ARDEX BA 70 CC](http://ardexaustralia.com/products/repair-mortars/ardex-ba-70-cc) should be used immediately after finishing. Curing compounds should be sprayed onto the surface of the finished ARDEX BR 345 according to the Technical Datasheet of the curing compound.

**OVERCOATING**

To achieve a fine finish, use [ARDEX BR 120 FC](http://ardexaustralia.com/products/repair-mortars/ardex-br-120-fc) as a Fairing Coat; alternatively, the repaired patch can be rendered over with a suitable ARDEX Render or Coating. Refer to relevant Technical Datasheets for application of overcoats.

**TECHNICAL DATA**

The ARDEX BR 120 FC can be applied at a minimum thickness of 1mm and a maximum thickness of 3mm.

Once cured, the ARDEX BR 120 FC will achieve a compressive strength of 24MPa at 28 days and a flexural strength of 7MPa at 28 days.

The ARDEX BA 70 CC has a water retention efficiency of ≥90% and conforms to AS3799-1998.

The ARDEX BR 345 can be applied at a minimum thickness of 10mm and a maximum thickness of 80mm.

Once cured, the ARDEX BR 345 will achieve a compressive strength of 35.9MPa at 28 days; drying shrinkage of ~600 microstrain at 28 days and a flexural strength of 8.6MPa at 28 days.

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). It is the responsibility of the user to ensure that this document is current and most up to date. 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).